

*G. Arts, W. Dicke and L. Hancher (eds.)*

*New Perspectives on  
Investment in Infrastructures*

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*New Perspectives  
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## PREFACE

Modern societies could not exist without dykes, a supply of drinking water, sewers, roads, electronic communication, airports, waste processing and electricity. For a long time these infrastructures were in the hands of the government. However, processes of liberalisation, privatisation, breaking up into smaller entities, commercialisation and internationalisation over the last 15 years mean that many of these infrastructures now operate at arm's length from the government. Long-term investment is a condition for the continued adequate functioning of infrastructures now and in the future. This not only means investments in maintenance; there is an urgent need for investment in the future because all infrastructures face major challenges: climate change, reduction of CO<sub>2</sub> emissions, global capital flows, to name but a few. Meeting these challenges will demand major investments.

The compilation of this Investigation was prompted by growing concerns which are emerging in the political, social and academic debate that the shift in operational roles from the government to other actors in such infrastructures means that long-term investments could be jeopardised. The central question in this Investigation is how and by whom long-term investments in infrastructure can continue to be assured under the new operating conditions that have arisen as a result of the regime change, in the light of the future challenges which the infrastructures in question will have to deal with. With this in mind, this collection of essays analyses the relationship between regime changes (such as liberalisation and privatisation) and long-term investments in infrastructure.

The essays in this collection focus on different infrastructures. Some of them describe one specific infrastructure, while others are concerned with themes relating to investments in various infrastructures. These themes include things such as the public interest, strategic activity and private equity. The collection is multidisciplinary in its approach: investments in infrastructure are analysed from an economic, legal, administrative and technical perspective.

This Investigation shows that regime change has led to significant changes in infrastructures: some intended, some unintended and some undesirable. No unambiguous policy recommendations are offered in this collection – that is done in the Report – but different perspectives are outlined from which these problems can be considered.

In publishing this investigation, the WRR is seeking to contribute to continuing the reflection on these issues which are so vital for our society. After all, without investments, it not only be the infrastructure that is in danger, but also the present and future functioning of our society. The report *Infrastructures. Time to Invest* is based in part on the preliminary studies and essays published in this Investigation. Through this publication, the Council is also seeking to make these studies more accessible to a wider public. All papers/essays with the exception of Lavrijssen/Hancher, were completed in 2007. The Council wishes to thank the authors for their willingness to collaborate in the preparation of the report.

Prof.dr. Wim van de Donk, Chairman WRR



# 1 STUCK ON THE TRACKS? EMPIRICAL STUDY FOR INVESTMENTS IN THE DUTCH RAILWAY INFRASTRUCTURE

*Rudi Bekkers*

## 1.1 INTRODUCTION

In recent years, concerns have been expressed in the Netherlands about investments in ‘public’ infrastructures such as energy, public transport, the water supply and telecommunications. In order to satisfy the public’s ever-changing concerns about demand, environmental goals, etc. some of these infrastructures may require large-scale investment. Over the past decades, many of these infrastructure sectors have been confronted with new regulatory models, liberalisation and privatisation. Although these developments possibly helped to improve cost-effectiveness, they could now be hindering the ability of infrastructure managers to meet the demand for investments. The (shareholder’s) demand for profitability might not match the public desire to invest in capacity, quality, new services, or more environmentally friendly systems. In addition to the issue of investment, similar questions have been raised about performance, innovation, and other features related to governance structure.

This paper focuses on the Dutch railway infrastructure, and aims to answer the questions of whether investments in infrastructure involving large adaptations or upgrades are desirable (seen from the public perspective) and if the railway sector in its current state is able to make such investments. As the Dutch railway sector has not had to face privatisation and only limited liberalisation, it is interesting to compare it with sectors where such developments have had a larger impact. The performance of the railways is always a highly topical subject in the media and in the political arena. At first glance, the Dutch railway sector would seem to be challenged by the desire of politicians and the public to become involved in large investment projects, such as a new European safety system and improved power supply for trains. On the other hand, earlier large investments such as the ‘Betuwelijn’ freight connection from Rotterdam harbour to Germany, later faced criticism that it was too expensive and unnecessary. The high-speed train line between Amsterdam and Belgium has also been criticised for delays and mounting costs.

### 1.1.1 RESEARCH FOCUS AND METHODOLOGY

The overall aim of this paper is to understand the governance model of the Dutch railways and to explore what lessons can be learned from experiences in this sector. More specifically, we will focus on the following four research questions:

1. Is the level of investment in the railway sector, seen from the various perspectives, considered adequate? Is the allocation of investments also adequate?

2. How does the railway sector perform, and how is that related to the use of Key Performance Indicator regulations?
3. How innovative is the railway sector and to what extent is it able to adapt to its changing environment?
4. What other lessons can we learn from experiences in this sector?

For this paper, we specifically address railway *infrastructure*, although occasionally this cannot be done without taking the providers of passenger and freight services (the rail operators) into account. We also focus predominantly on passenger services as well as occasionally referring to freight transport by rail.

This article is based on interviews with representatives of the various stakeholders (infrastructure managers, rail operators, regulatory agencies) as well as academics and sector specialists. A total of eight interviews were conducted among six key stakeholders. These interviews were held in the spring of 2007 and views are supplemented by secondary sources (literature, internet data sources). Unless otherwise noted, the (anonimised) views and claims in this paper are based on these interviews. Given the scope of this paper, we do not claim to be representative or exhaustive. We do believe, however, that this short study provides valuable insight into the functioning and governance of the railway sector.

Furthermore, we would like to point out that this study is explorative. Our aim is not to give decisive answers based on a large empirical study, but rather to understand to what extent governance problems, in particular investment problems, are present in this sector.

### 1.1.2 STRUCTURE OF THIS PAPER

This article is structured as follows. Ever since the early days, railways have been considered as fulfilling a public service. Section 1.2 introduces the public interests that are at stake in this sector. Section 1.3 continues by describing the regime changes Dutch railways have undergone in the past two decades, and summarises the current governance model. Section 1.4 aims to answer the first three research questions (investment, performance, and innovation), and the subsequent section focuses on the fourth research question by discussing possible improvements to the governance model as suggested by the stakeholders. Section 1.6 draws conclusions and discusses what can be learned from this specific case study.

## 1.2 THE PUBLIC INTEREST IN RAILWAYS

Not long after the introduction of the very first railways, governments realised that these networks provided services that were highly beneficial for society and contributed to economic growth and welfare. Like in many other countries, the first railway services in the Netherlands were introduced by private firms but

over time, government involvement grew and eventually the various networks were nationalised and formed the basis for a nation-wide, state-owned network.<sup>2</sup> Railways ultimately became widely recognised as a traditional public service (or: public utility), along with, among others, the water supply, electricity, and telephone service.

Generally speaking, the public interest in such ‘public services’ covers a rather wide scope. As far as railways in the contemporary setting are concerned, the most relevant public interests are as follows:

1. The availability of services in space and time (which routes are offered, and how frequently?)
2. The quality of the services (reliability, punctuality, capacity, comfort, connecting trains, provision of information, accessibility, etc.)
3. The affordability of the services (tariffs as well as other funds such as subsidies)
4. The safety of the passengers and third parties
5. Environmental pollution.

Although these interests are generally true for both passenger and freight services, the latter category involves some additional public interest like the relief of the road network. Below, we will elaborate two of the interests that have attracted public attention in recent years: service quality and safety.

### 1.2.1 THE QUALITY OF RAIL SERVICE

The quality of rail service is one of the most topical aspects of the Dutch railway systems, and in particular, punctuality and reliability of the services. With a network that handles 1.2 million passengers per day, there are few people who have never experienced a disruption while travelling by train. Not only is the alleged lack of quality the favourite topic of conversation among travellers, service quality features extensively in the media. It will come as no surprise, therefore, that service quality is often debated in Parliament and is usually a delicate subject during political discussions, especially at times when tariff changes are being proposed by Nederlandse Spoorwegen (NS, literally translated ‘Dutch Railways’).

In recent years we have seen a number of major service disruptions. For instance, on 7 April 2005, a technical piece of equipment caused a major disruption in the train flow in and around Utrecht, resulting in hundreds of passengers being stranded in the station that night.<sup>3</sup> On 26 February 2007, a hard disk crashed in a critical piece of the railway network’s ICT, which caused all of the trains in and around Amsterdam to be cancelled for more than half a day. In addition to such large-scale interruptions, travellers experience varying degrees of delays or interrupted services throughout the year. In the more distant past, the Dutch railways had a rather solid reputation when it came to the standard of service. For a variety

of reasons (see also below), the quality of the service dropped and reached a dramatically low level in 2001. After that year, the (measured) quality has gradually improved.

Because the quality of the service is considered to be such an important and contentious issue, it is subject to an advanced monitoring system. Due to its many dimensions and its rather complex nature (in the context of railway services), service quality is hard to measure objectively. Disruptions are caused by a variety of factors: They can be planned (e.g., maintenance work) or unplanned; they can be attributed to the infrastructure manager, the rail operator, nature (e.g., storm, snow or lightning), or to a third party (e.g., a car hitting a train, a truck damaging the overhead wiring, or a case of suicide). Furthermore, people's perceptions of the quality is subjective and does not always correspond with the facts. And while such measurements are meant to be objective, the outcome very much depends on which dimensions are being measured, and how they are being weighted.

### **1.2.2 THE SAFETY OF RAIL SERVICE**

Rail transport is generally recognised to be one of the safest modes of transport. Nevertheless, when something does happen, everyone knows about it. The train disaster (92 fatalities) near the village of Harmelen in 1962 shocked the nation, and served as the stimulus for the widespread deployment of a railway safety system (see below). Since Harmelen, the Netherlands has fortunately had no other major accidents, unlike Germany where on 3 June 1998, an accident with a hi-speed train near the village of Eschede left 101 passengers dead and 88 injured. However, there have been minor incidents and train safety is still high on the public agenda. On 9 March 2007, two trains collided close to Amsterdam's central station and it was the fifth accident of its kind within three years at this station. In recent years there have also been a number of accidents or near misses in other parts of the country.<sup>4</sup> As far as the majority of these accidents is concerned, the Dutch Safety Board (the body responsible for studying such accidents) concluded that they were caused by shortcomings in the current safety system, which does not function at speeds below 40 km/h.

## **1.3 GOVERNANCE OF THE DUTCH RAILWAYS**

Having discussed the main public interests in railways, we will continue our story by describing the regime change the Dutch railways has undergone in the past two decades and by summarising the current governance model.

### **1.3.1 REGULATION AND REGIME CHANGES IN THE DUTCH RAILWAY SECTOR**

Given its small size and relatively large population, the Netherlands has a very dense railway system. With a network of just under 3,000 km and almost 400 railway stations, the Dutch carriers operate around 5,000 passenger trains and

280 freight trains per day. For many decades, all railway activities were concentrated in one single organisation, the Nederlandse Spoorwegen (NS). The prevailing opinion was that the railways met virtually every criterion for being a natural monopoly: it has large economies of scale and replication of the infrastructure is not feasible.<sup>5</sup> However, in recent years regime changes have taken place, instigated by new ideas about the best and most cost-effective way to operate such infrastructures. In particular, operating the railways still demanded substantial government subsidies, while the vertical integration of the old-style NS had resulted in a lack of effective incentives for efficiency. The Dutch government aimed to stimulate transport by train (in favour of other modes such as road transport), but at the same time did not want to bear the ever higher costs. In addition, there was pressure from the European Union: In 1991 the European Commission started to issue various recommendations aimed at improving competitiveness in this sector. In a series of directives issued between 1991 and 1995, the separation between railway infrastructure and exploitation was prescribed. Advised by the Wijffels Committee, the Dutch government implemented such a legal separation in 1995, not only separating it in financial terms but also in practical terms. In 2003, this vertical separation was adapted: many different entities that had been created for the exploitation of passenger services, international services, stations and real estate, were again merged into a single entity (still called Nederlandse Spoorwegen). The infrastructure manager, earlier dubbed Railinfratrust, was renamed ProRail.

Alongside the process of vertical unbundling, preparations were made to privatise the Nederlandse Spoorwegen, though this task has yet to be completed. Privatisation would allow the government to distance itself from daily management, investments, supply of services, etc. Instead, the regulatory changes such as separation had resulted in mutual distrust, while uncertainties concerning the forthcoming privatisation and liberalisation had a paralysing effect on the synergy of the rail sector (Weerdhuizen, 2006). Necessary investments in rolling stock, among other things, were postponed due to fears that a future recession would make such large expenditures irresponsible. In 2001, this resulted in a downwards spiral: a major computer malfunctioning, a series of infrastructure failures, a strike and a riot on a national holiday (Queen's Day) in Amsterdam, all took the performance figures of the railway system to new depths. In response, the Dutch government concluded that competition was not working out as planned, and revised its strategy. It was decided to halt the privatisation of the NS and to grant an exclusive 10-year concession to the NS for the so-called Main Line Network (MLN) for passenger transport (this concession was later prolonged). There would be no competition for this part of the network. However, on the other hand, the NS had to operate it without subsidies of any kind. This concession included performance indicators (see below). The remaining parts of the network that could potentially represent losses were opened up to bidding. The government (or local authorities) could then consider subsidising the most attractive bids, if they wanted to have a certain service made available for the public. Operators that made successful bids included Arriva, Syntus, Connex-

xion, Veolia Transport and DB Regionalbahn Westfalen (which operates an international line). On the infrastructure side, ProRail was granted a 10-year concession to maintain the Main Line Network, but the state would bear the costs for this contract. ProRail's concession also included performance indicators. In its so-called Network Statement, ProRail has, among other things, defined the usage fees (for operators) and access agreements. In 2004, ProRail's concession was extended to 2015.

In retrospect, the year 2001 can be seen as a turning point. Box 1 summarises the main features of the pre- and post 2001 era.

**Box 1      Comparing the railways before and after the year 2001**

Between 1995 and 2001,

- Infrastructure and services were still integrated into a single company, which was regulated at a high level of detail.
- There was a large amount of uncertainty, especially concerning the future rights of the NS for providing services on the network.
- This resulted in 'sweating the assets'.
- Virtually no new staff was hired for almost 10 years, and there was a brain drain as many of the most capable people left the company to work for commercial firms (in particular NS suppliers).
- This all resulted in a very visible crisis in around 2001, when it became evident there was a high degree of overdue maintenance.

From 2002 on,

- A new constellation was created in which ProRail became independent from the branch providing passenger services.
- Overdue maintenance was recognised and a collective plan (government and all actors) was drafted to catch up.
- Life cycle management of the assets was introduced.
- Return-on-investment (ROI) became more important though not in the sense of shareholder value, but in the context of awareness of where to spend money and how that would contribute.

There is a general understanding that if all of the railway's expenses were directly passed on to the passengers, train fares would reach such levels that demand would fall, resulting in a decreased use of public transport below what was publicly desirable. And so subsidies were deemed necessary. One of the virtues of the current governance system is that *only* the infrastructure is subsidised (to a very large extent). Service operators including NS must ensure that they have a feasible, durable business model in which the income generated by ticket fares is sufficient to cover all of their costs.

As indicated above, ProRail and NS both work on the basis of an exclusive concession, and both are state-owned. However their working relationships with the State differ. The capital stock of NS is owned by the Ministry of Finance. The NS's

relationship with the Ministry of Transport, Public Works and Water Management<sup>6</sup> is purely that of a concession holder, not a shareholder. This has resulted in a rather arms-length involvement: the ministry looks for continuity in its investment and an appropriate return on investment. Its goal is a situation in which the NS is responsible for its own operational management and is able to make reserves where necessary, so when it needs to invest in rolling stock, for instance, it does not have to turn to its shareholder for funds. In contrast with the NS, the relationship between ProRail and the Ministry of Transport is both that of a concession holder and that of a shareholder. Moreover, ProRail basically manages an asset that is directly owned by the State and not by ProRail itself. These factors have resulted in much more direct control.

Compared to passenger services, freight transport has been largely liberalised. In 2001, the former freight subsidiaries of the NS and that of the German railway incumbent Deutsche Bahn merged to create a new firm called Railion. At least eight private firms took advantage of the opportunities created by the liberalisation and entered into the freight market, including RAIL4, CHEM, ACTS and ERS. This market has seen a successful introduction of competition, although we should bear in mind that this cannot be easily applied to passenger transport services as that market is facing different conditions. The freight market is show-

**Table 1.1** Main actors in the Dutch railway sector

<i>Actor</i>	<i>Type of organisation</i>	<i>Activities/ responsibilities in the railway sector</i>
ProRail	Firm, 100% state-owned	Infrastructure development and maintenance, capacity allocation, safety, traffic control and charging.
Nederlandse Spoor-Spoorwegen (NS)	Firm, 100% state-owned	Exploits railway services on the Main Line Network and other lines for which it obtained licences.
Ministry of Transport, Public Works and Water Management	Government agency	Responsible for mobility policy, prepares legislation, and also has special powers to ensure the correct functioning of the market on the basis of the Railway Law. Has the power to grant (regional) concessions.
Transport and Water Management Inspectorate (Inspectie Verkeer en Waterstaat - IVW)	Government agency	This organisation promotes and inspects transport safety on railways.
Netherlands Competition Authority (NMA)	Government agency	The NMA enforces compliance with competition law. Has a special office for transport regulation.
Provinces	Regional government	Have the power to grant regional concessions.

ing considerable growth and it is now considered to be a dynamic and innovative market: entrants have developed new (multi-modal) logistic services and were able to increase cost-efficiency, in turn challenging the incumbent freight operator to innovate as well.

The basis for the current regulation is laid down in the so-called Spoorweg- en Concessiewet, a railway and concession act, which was introduced on 1 January 2005 and will be evaluated in 2008.

Recently, some have questioned the advantages of the current vertical unbundling. In particular, a resolution by a Member of the Upper Chamber (Prof. D. Wolfson) has called for a study of alternative sector regulations, including the cancellation of vertical unbundling.<sup>7</sup> Stakeholders, however, believe that the unbundling has been very successful and see no reason to turn back the clock. The clear separation of responsibilities, the measurement of key performance indicators, the introduction of incentives and the (threat of) new entrants, have resulted in a railway system that is much more cost-effective than before. (It should be noted that this is not always very evident to passengers: the cost savings resulted in a reduction in subsidies, not in lower fares.) However, regulation policy is still not perfect at the this time. All of the actors are still learning and improving, but the stakeholders believe that undoing unbundling would be a step backwards in the aim to achieve a high-quality, price-effective railway system.

#### 1.4 ASSESSING THE CURRENT FUNCTIONING OF THE DUTCH RAILWAY INFRASTRUCTURE SECTOR

In order to assess the performance of the Dutch railway system, and to learn from the experiences in this sector, we now turn to our three central research themes:

1. investments (both the level and allocation, as well as government involvement);
2. performance;
3. innovation.

As in any sector, the appropriate level of investment, performance and innovation is a normative issue; different stakeholders (including the public itself) will have different expectations. Individual experiences matter as well, and relative efficiency can only be assessed once you have a good understanding of all the technical and economic characteristics of the sectors and the many trade-offs. We base our assessment below on the views of the various stakeholders we interviewed, and we will indicate where their views diverged.

In the subsections that follow we will further investigate each of the three themes in turn.

### 1.4.1 INVESTMENTS IN RAILWAY INFRASTRUCTURE

Railway infrastructure is expensive, both to build and to maintain. As discussed previously, the Dutch state bears the majority of costs for maintaining, upgrading and extending/enhancing the railway network. For 2006, more than 90% of ProRail's budget of € 1.366 billion came from state subsidies and the remaining 10% from usage fees (paid by the operators to the network manager).<sup>8</sup> Substantial spending in maintenance and replacement is required to keep a railway network in good operational state. Of the current budget, around € 900 million (approximately 66%) is spent on those tasks. In 2004, substantial deficiencies in the condition of the network were identified. A recovery plan called 'Herstelplan Spoor' presented a 'catching-up' agenda. According to the Ministry of Transport, the desired level of maintenance investments has now been reached.

New large-scale infrastructure projects are usually realised outside of ProRail's budget. In the past ten years, many such large projects were initiated and most will reach completion in the next few years. The largest projects are listed in . No big new infrastructure projects (for example, new lines) are expected in the next decade. Instead, the focus will be on management and maintenance, and gradual upgrading.

**Table 1.2 Major new infrastructure projects, 2000-2020**

<i>Project</i>	<i>Expected finalization</i>
High-Speed Traject (HSL-zuid)	2007-2008
Betuwe freight line (Rotterdam to the German border)	2007-2008
Large scale renovation of trajectory Amsterdam - Utrecht	2007
Hanzelijn (Lelystad - Zwolle)	2012
Tunnel at Delft	2012
'Key projects', especially major station upgrades for Amsterdam South Axis, Utrecht, Rotterdam, The Hague, Arnhem, and Breda.	Various

#### **Overall level of investments**

Stakeholders, in interviews stated that, the overall level of investment in railway infrastructure in recent years had been adequate. Some actors felt that this was no longer the case for the coming years. The current government, which was formed in early 2007, in its coalition agreement expressed a goal 5% growth annually in train transport (expressed in passenger-kilometres). This is substantially higher than the 1% annual growth that was assumed in previous years. Though stakeholders think this is a realistic aim, it cannot be realised without substantial extra investments in capacity over the coming years, particularly improving the capacity of those existing lines that are already at their maximum. The NS estimates that in the coming 10 years, an additional investment in the range of 7 to 10 billion Euro will be necessary to support the targeted growth.<sup>9</sup>

### **Allocation of investments**

Interviewees were more critical about the allocation of investments than the actual level of investments. In fact, the majority of the stakeholders we talked to felt that political and government involvement has resulted in an almost one-sided focus on large-scale projects. As one interviewee noted: "The real interest is in building large, recognisable pyramids and cathedrals." Ministers, Parliament members, county councils and other have committed themselves to certain high-profile projects. It then becomes a matter of personal prestige to have these very visible projects realised, even if the economic analysis reveals that the demand is lower than expected or that the cost/benefit ratio is less desirable than assumed. The more necessary, but often much less obvious work on the maintenance and improvement of the existing network falls victim to these large projects. For instance, essential budgets for existing lines have been reduced because policy-makers have preferred to accelerate the deployment of the three new lines: Betuwelijn, the HSL and the Hanzelijn. The regular train passenger has been the victim of this practice.

There are two interesting examples of how national or European politicians or the public are calling for large-scale investments, while stakeholders seriously question their desirability or feasibility. These projects include ERTMS (the implementation of a new, European standard for railway signalling) and 25kV (the upgrading of the power supply to trains from the current 1,500 kV DC to the more modern 25 kV AC standard). The ERTMS and 25kV projects are discussed in annex 1 and annex 2, respectively. We conclude from these case studies, that despite the public urge to implement a new safety system and upgraded power supply systems, there are few arguments that really justify these expensive projects.

Bottlenecks can sometimes be removed through a more effective use of existing facilities. For instance, it may help to re-address the trade-off between capacity and punctuality. A good example of this is the Schiphol tunnel near the national airport. Instead of adding extra tracks (a very expensive option), ProRail has agreed with the NS to ease the norms for punctuality. As a result, the implementation of a new ICT system enabled a very significant increase in capacity on that critical line. Unfortunately, such initiatives have not been applauded because it is not a large, visible project. Spending € 7 million on ICT is not as sexy as spending ten times as much on new tracks. It should be noted that while some stakeholders have great expectations for these 'intelligent reworks', others can put them in perspective and emphasise that these things only work in a limited number of unique situations.

### **Government involvement in investment decisions**

Under current legislation, ProRail develops annual plans for its targets and activities, including proposals for both capital expenditures (investments) and operational expenditures. Although the government reviews these proposals and might re-negotiate the total size and direction of investments at a higher level, ProRail is considered to be an autonomous entity with regards to how it realises

its targets. (Large projects such as new high-speed lines are a completely separate item.) Still, ProRail feels that it has a limited amount of room to move and does not really have the freedom to work on the network in the way it thinks is the most appropriate. This is not so much the result of interference by the government, but more often due to the general rules and norms concerning the rail network. For instance, many tracks have to meet standards where they can withstand the strain of more than a dozen very heavy freight trains daily. However in reality, a large proportion of these tracks hardly ever carry freight trains, let alone the heavier ones. As a result, many tracks are over-specified (sometimes referred to as a 'gold-plated network'). The resulting costs may hamper extra investments in tracks that actually do have to cope with very heavy loads.

Finally, with respect to the levels and allocation of investments, actors have also criticised the government's ability to carry out appropriate risk assessments. This is further discussed in section 5.

#### **1.4.2 PERFORMANCE OF THE RAILWAY SECTOR**

When the current regime was institutionalised, a governance model was introduced based on Key Performance Indicators (KPI). Using this regulation, the government's aim is to safeguard public interests as well as to ensure that services are offered in an effective and efficient manner. Given the scope of this paper, and the fact that performance regulations of railway infrastructure services and train services are entangled, we will address both infrastructure and services in this section.

The Dutch railways saw a severe drop in service quality in around 2001. This was clearly reflected by KPI measurements. Since then, annual reports have shown a steady improvement in the measured indicators. Given the specific Dutch context (one of the busiest and densest networks in the world), interviewees claim that current performance levels are rather good. Interestingly, this observation does not necessarily match the experience of individual travellers, as the KPI measurements are of course based on averages. Passengers travelling on particularly troublesome lines may face considerable delays on a daily basis, while clients travelling on the unaffected other lines seldom experience delays at all.

Currently, KPI's are measured and made public, for the performance levels of both ProRail and the NS. The measurements are now basically considered to be a learning process and levels of performance are, however, not yet linked to consequences. In the future, this will change and the concession holders may face penalties for not meeting the minimum standards.

The stakeholders in general are rather positive about the performance measurement system. Never before has there so much insight into the actual performance of the railways, and slowly the various actors are learning how to optimise their performance. However, some aspects have also been criticised:

- By definition, the set of measurements is limited and may not necessarily reflect the way end users experience travel quality (though this is partly addressed by complementing the ‘hard’ KPI measurements with some overall subjective judgements by end users).
- The sector is learning a lot from these measurements, and is also developing new ways of improving such measurements. It is very problematic, however, to introduce new and better measurements, as this will interrupt the creation of the longer-term series that are required.
- Some interviewees note that during times of under-performance, the regulator and politicians tend to increase the number of measured indicators. Bringing in new criteria is considered by some MPs as a way to profile themselves. (Though it has to be said that some ministers and state secretaries are less susceptible to this kind of opportunism than others.)
- There are currently dozens of indicators, 42 to be precise. According to some stakeholders, this is far too many, and some indicators create adverse incentives and may result in strategic behaviour. For example: after a major disturbance, the NS needs to get all of its delayed passengers to their destination as quickly as possible especially when it is late at night. This has a positive effect on the indicator concerning ‘client satisfaction’ but an opposite effect on punctuality (which would be higher when operating some trains on time and skipping the others altogether). Another example is that if operators are heavily regulated for the punctuality of individual trains, they may be tempted not to have connecting trains wait for slightly delayed trains, thus reducing the chances that travellers can effectively catch connecting services and compromising over-all trip quality.
- Some indicators give a distorted view. The famous ‘track availability’ indicator seems to be very good at 99.3%. However, the way this indicator is measured (taking the average of thousands of districts) does not reflect the availability as experienced by a traveller (even when only one of the many districts of a trip is unavailable, the whole trip is affected). Furthermore, this indicator neither distinguishes between day or night, nor between busy and less-travelled lines.
- Finally, there is the problem of static versus dynamic efficiency. In order to improve performance over the longer term, it is sometimes necessary to invest in construction works that compromise short-term performance.

On the basis of this criticism, some stakeholders have pleaded for a smaller set of indicators, closer to how end users experience service quality. If this were the case, they would be (better) prepared to be held accountable for specific aspects of performance. An additional advantage of this proposal is that clients will decide for themselves how they weigh the various aspects of service quality, instead of the regulator determining the relative weights of all these different aspects. (It is advisable, however, to continue monitoring all of the current KPIs, purely for the insight this offers and not for accounting purposes.) At this moment, KPI scores are informative and they are currently not used to sanction or reward the concession holders. The KPI system is still in a learning phase. In the near future, however, KPI scores will have more immediate consequences.

### 1.4.3 INNOVATION IN THE RAILWAY SECTOR

As a predominantly technical sector, the railways can be seen as providing many opportunities for improvement and innovation. Innovation can take many different forms. It can be related to functionalities, capacity management, and improvement of safety (for train travellers, other traffic participants, train workers), among other things. The level at which innovations in this sector have materialised, however, differs over time. During the period from the early 1990s up to the period of crisis in 2001, innovations became stalled. After 2001, it took some time before modernisation was able to catch up and for stakeholders to notice that the innovations were finally taking hold.

The liberalised freight regime has led to a situation where international logistics/freight companies are entering the market and introducing entirely new concepts for intermodal transport (e.g., ship-to-train). They achieve cost levels that are way below that of the incumbent Railion, which, in turn, stimulates the development of new services. There have also been promising innovations in passenger transport whereby train and bus transport have been very well integrated, creating a valuable service for the end user. Concepts like light railways also serve new markets and improve the link between short- and long-distance transport. Meanwhile, process innovations are finally also beginning to take place. A recent example is the creation of a direct link between train drivers and maintenance personnel. Instead of going through a rather bureaucratic, hierarchic and time-consuming procedure, technical help can now be called for in a faster and more cost-effective manner. Another innovation which attracted international attention was that of the development of a carriage without floors, in which railway maintenance personnel can work safely even when there are trains passing on adjacent tracks.

Innovation continues to appear higher and higher on the agendas of the various actors. A good illustration of that is ProRail's annual prize contest which invites companies and individuals to submit innovative proposals. On the whole, actors agree that this sector is becoming more innovative.

## 1.5 CURRENT ISSUES AND SUGGESTIONS FOR IMPROVEMENTS

Our fourth research question concerns the other lessons we can learn from experiences in this sector. During the interviews, various issues relating to the current governance setting were raised, and some suggestions for improvement were offered. Seven of these are discussed below.

### ***Issue 1: The need for a stable, long-term government vision on public transport***

Rail transport should be part of a larger, more complex vision on transport, town and country planning, etc. It has far-reaching consequences for the built-up environment, not the least because train lines run through the middle of most cities.

Although the current bill ‘nota mobiliteit’<sup>10</sup> is a good start, we are still far from a stable, integrated and long-term vision regarding transport (and the role of railways within it). Interviewees suggest that such a vision should incorporate the following:

- Integrate train transport into the wider setting of metro, trams, buses and light railways. There are still many opportunities to complement the various modes of transport into an all-compassing public transport system, and to co-ordinate them well.
- Stability: One current problem is that policy officials are often swayed by the issues of the day. They are constantly facing the criticisms of politicians, Parliament, the press, public opinion, etc. The closure of a train station often evokes public outcry, thus increasing pressure on policymakers. This makes it hard to stick to a bigger plan. The policy should be stable for an extended period of time; regulatory uncertainty destabilises the market.
- Should place the availability of end-end services at its heart, not the availability of infrastructure as such (as is now the case).

### **Issue 2: Mismatch with demand**

Some actors point out that in the current governance setting, there are few incentives and these do not work effectively. Spending and earnings in the system are largely not connected, with the result that demand is not satisfied as well as it could be. In the view of these actors, the market would greatly benefit from a higher degree of differentiation in functionality (performance) and price. Experiences show that the introduction of a luxury train between Amsterdam and Brussels (now still travelling at the same speed as the regular train!) attracted travellers from an entirely new market segment that previously did not make use of train travel. The sector should allow a much higher proportion of differentiated services, thus enabling it to provide what clients are prepared to pay for.

A particular problem in this context is experienced by the infrastructure manager, ProRail. This firm is financed by the state and tightly regulated, whereas adjacent players in the value chain are much more market-based. ProRail procures its work from commercial firms (especially four construction firms and three to four engineering firms), and it provides services to operators, some of them private, some not, but all of them offering services in a commercial market. Being stuck between a state regulated system and market actors makes its situation difficult. At this time, ProRail’s efforts are largely dominated by the government. As a result, many tracks have to meet the highest standards (for instance, being able to take nine freight trains per hour), while this is often totally unnecessary. As argued earlier, this has resulted in ‘gold-plated tracks’ and very expensive turnouts in locations where the effects of failure would be modest, and to the detriment of investments in capacity and material in those locations that are extremely critical. More flexibility would allow ProRail to direct its efforts to where they are most needed and most wanted by its clients, the service operators. Some extensively used lines (especially in the Randstad (metropolitan) area) call

for greater efforts than they now receive, while other areas could be kept at the desired and necessary levels of quality with less allocated efforts.

A related example is that of the Betuwelijn, the new freight line that connects the Rotterdam harbour with Germany and beyond. The Dutch part of this state-of-the-art trajectory was officially opened by the Queen on 15 June 2007. However, within the first two and a half months of its operation, only about two dozen commercial trains have used this line (apart from some test trains).<sup>11</sup> According to the freight operators, the main reason for this is that the connecting German part of the line is far from ready.<sup>12</sup> After crossing the border, the freight trains still have to continue on old, low-capacity tracks with many level crossings. Germany, however, seems to be more interested in realising an alternative route towards Belgium, called 'IJzeren Rijn'. Although it is too early to say whether there will be a future demand for the Betuwelijn, it seems that commercial investors would never have invested so much money without ensuring that end-to-end services were in place.

### ***Issue 3: Governments do a poor job of incorporating risks into their decisions***

Given the nature of railway networks, infrastructure designers often have to deal with trade-offs between risks and costs. These risks include both 'internal' risks such as service availability, safety for passengers and staff, etc. and 'external' risks like safety for car drivers, cyclists, pedestrians, and people living near stations and train tracks. In the current (and past) regulatory settings, it has been mostly the state entities (central, regional, local) that assess the risks and make (or impose) related investment decisions. Stakeholders argue that in many cases these decisions have not been made on sound criteria. On the one hand, risks are undervalued and appropriate measures are not taken; on the other, risks are exaggerated and money is spent that unnecessarily threatens the cost effectiveness of the system. In the latter case, that money could have been better spent on counteracting other risks. We will give an example of both:

1. In the 1970s and 1980s, policymakers decided not to budget for redundancy in the rail manager's computer systems, thus saving around 10%. Now we have seen several major traffic interruptions that are a direct consequence of that choice, such as the recent half-day interruption in the Amsterdam area due to a hard disk failure. Although ProRail is now catching up and including redundancy, this is a time-consuming and complex process. The public considers these interruptions unacceptable and cannot believe that these critical systems are not redundant, and ends up blaming ProRail or the NS.
2. In the case of the Betuwelijn, mayors of nearby towns were extremely risk-averse and demanded fire-fighting capabilities and enormous water supplies all along the line, for the one-in-a-million chance of an accident occurring close to their municipality. These kinds of safety measures would be unnecessary if a train were to catch fire in an open field. These measures would also be inappropriate when you realise that this same freight train travels on existing tracks, through numerous large stations and track yards and through densely

populated areas, where improved fire-fighting facilities would be much more appropriate.

To summarise, the actors have indicated that governments are not well equipped to assess risks and incorporate them into investment decisions. Instead, they believe, it is better to have the rail manager responding to market stimuli (loss of income, damage to reputation or image loss) when deciding on risk-associated spending. In the eyes of the various stakeholders, the pros and cons would then be weighed in a much more sensible way.

***Issue 4: Co-ordination issues and system innovations***

Good co-ordination between the various actors is very important, and there is still room for improvement. Now that parts of the value chain have been separated (a development applauded by all of the stakeholders), the challenge is to decide at which level issues can best be addressed and how activities among the various layers can best be co-ordinated. These issues affect capacity, but also safety and environmental issues, for instance. Currently, we can observe a number of sub-optimal outcomes and we will give a few examples:

1. Noise pollution can be addressed either at the infrastructure or rolling stock levels. When the aim is to reduce noise, governments usually turn to the infrastructure level by erecting sound screens along the tracks, as they have more control over that level than on the more market-based rolling stock level. However, fighting noise pollution can be much more cost-effective at the rolling stock level.
2. Having two safety systems (ATB and ERTMS) installed along each and every track in the country is much more expensive than having trains equipped with both standards. In the latter case, the rail infrastructure only needs to have one of the two systems installed at any given location, allowing for a gradual update of this network infrastructure. However, legislation frustrates the most cost-effective option: using certain structural funds to subsidise the installation of ERTMS equipment in rolling stock faces regulatory hurdles as this is not seen as 'infrastructure', unlike ERTMS equipment within the network.
3. Many dangerous goods are transported by train, and this has led to several incidents in recent years. This calls for expensive safety facilities. One could debate whether such investments are desirable or whether it wouldn't be better to try to have the production facilities closer to where the demand is.
4. Some infrastructure additions/improvements that have been made of late are not being used intensively (or not at all) by the carriers. For instance, the NS has decided to schedule only a few trains along the new Utrecht-Amsterdam line into Schiphol Airport, arguing that the operating costs of more frequent trains are too high (see also Issue 1 above).

What is necessary is a more dominant systematic approach encompassing good insight into such complex systems, better co-ordination, and appropriate equipment that serves the public interest, for instance, in providing effective incentives for market-based firms.

### ***Issue 5: Incompatibility of concession contract terms and investment decisions***

As discussed earlier, in circa 2001, the Dutch railway system faced a period when the involved actors delayed almost all investments because of uncertainties over their role in the future. Consequently, there were not enough trains and carriages to meet the demand. This was addressed by buying old rolling stock from other countries. When the regime changed and the outlook for the various actors became less uncertain, the situation improved and the parties began to be able to justify their investments again. Still, the interviewees have indicated that, given the specific features of the railway network, the chosen concession terms are too short to secure investment decisions from the holders. Investments become especially unjustifiable in the closing years of a contract term. One important consideration is that there is often a gap of several years between the investment decision involving infrastructure, rolling stock, etc. and the actual introduction of the service.

### ***Issue 6: From a united system to a more flexible network of differentiated services***

There are now many new opportunities for innovative ways to meet demand and provide new services. To take advantage of these opportunities, more flexibility is required from regulators and more creativity is demanded from stakeholders. Municipalities, large firms, airports and other organisations can voice their demands for mobility services and get involved in contracts to realise this mobility (thus also contributing financially). We need to find new ways and mechanisms to bring about innovation. These opportunities can contribute to a better match between market supply and demand (see also Issue 1). It would be beneficial if more (private) contracts were permitted between the service provider, the infrastructure provider and other actors for specific lines, with specific agreements on aspects such as capacity, fast vs. slow traffic, parking facilities at the stations – all elements of differentiation. In this way, it would be easier for actors to make decisions on the investment in infrastructure and rolling stock. Current legislation can be prohibitive when it comes to introducing new services effectively. In practice, it seems to be an easier solution to simply label a new initiative as a tramway rather than a railway issue, in order to achieve a more workable regime. Among other things, a tramway does not have to meet the high standards of freight trains; these standards can be prohibitive, especially on lines where there will be no freight service anyway. (In fact, in this sense, light railways more closely resemble tramways in many respects.)

At this moment, there is (too) little incentive for the NS to adapt its service provision to meet market demand. If the NS were allowed to depart from a unity tariff and use more flexible pricing, it could react more appropriately to market demand, willingness to pay, etc. Current seat occupancy is around 30%. Although it would be impossible to obtain extremely high levels (like the approximate 80% in the airline industry), some improvement are necessary. And costs could be reduced more flexibly. For instance, you could adapt to varying degrees of

demand at various times in the day. You could also make much more use of light railways; as both usage costs and infrastructure costs are strongly dependent on the size and weight of rolling stock. Under current legislation, there are few incentives to introduce light railways.

Of course, we have to realise that not every line can be equally cost-effective. There are inspiring experiences from abroad (UK, France, Spain), where each proposal for a line must include an assessment of the expected cost/benefit ratio. For a given time frame, it is decided beforehand how many new lines will be allowed in each defined category of cost-benefit ratios (ranging from profitable to varying degrees of unprofitable). In this way, governments can permit some desired train lines (driven by public interest to connect a certain area), while ensuring the total network still reaches acceptable levels of cost effectiveness.

Moreover, stakeholders believe that a higher usage fee (paid from the service operator to the infrastructure provider) would also help create more incentives to adapt infrastructure to actual demand.

***Issue 7: Addressing the necessary knowledge level across the sector***

Finally, some experts have indicated that there is a knowledge problem at various levels in the innovation system. Issues in this sector are usually very technical by nature and the unbundling and outsourcing of workloads have led to a brain drain in many organizations. The result is that politicians, government representatives, infrastructure managers and operators cannot always assess the quality and real costs of the work they outsource. While competition was introduced to ensure that bids would offer best value for money, there are clear signals that the competition is far from optimum. Especially in the area of maintenance, where the manager can only choose the subcontractor with a local knowledge of that part of the network in question, effectively limiting the competition to zero. If competition cannot be used to secure cost-effective bids, knowledge is needed to counteract that problem.

## 1.6 CONCLUSIONS AND RECOMMENDATIONS

This paper has studied the Dutch railway sector, focussing on the network infrastructure. By doing so, we hope we have gained some insight into the pros and cons of the chosen governance model, and in particular into investments (level and allocation), performance and innovation. As Dutch railways have not had to face privatisation and only a limited amount of liberalisation, this sector is interesting to compare with sectors where such developments have taken place.

We can conclude that there is no clear evidence of serious underinvestment in the Dutch railway sector. It is argued, however, that future investments should keep pace with the ambitious growth of train traffic in the government's coalition agreement and with the actual increase in traffic. If they do not, we will end up

with a situation of underinvestment in the near future. Furthermore, stakeholders feel that the allocation of investments is still not optimal. Political involvement, among other things, results in an undesirable focus on new, large projects, in ‘pyramids and cathedrals’. These do not always correspond to actual demand and compromise the necessary efforts to increase capacity on existing lines where demand exceeds supply. In this study, we also paid particular attention to two scenarios, the introduction of the European safety system ERTMS and the upgrade of the power supply of trains to 25kV. The desirability of these – costly – network upgrades has also been widely discussed in Parliament. We can conclude that, despite such desires among third parties, the stakeholders unanimously agree that a short-term full-scale introduction of these technologies cannot be justified in any way. This again shows that the public discourse is rather different from the expert discourse.

All of the interviewees stressed that the railway system’s performance is good, especially if we take into account that the Dutch network is one of the most intensively used networks in the world. The unbundling of infrastructure of services, the reduction of uncertainties by granting longer-term concessions, and the systematic introduction of a Key Performance Indicator (KPI) system have all helped to bring the drastically low performance in 2001 back up to a very respectable level. All of the stakeholders further underlined the benefits of the KPI system. However, they did have some serious criticism: For instance, they believe that there are far too many indicators, that some indicators give a distorted view, and that others create adverse effects. Also, static and dynamic efficiency can be at odds with one another. Finally, there is an opportunistic tendency among politicians to add more and more indicators or judge performance on indicators that were never agreed upon.

Innovation in the rail sector has lagged behind for a number of years, as parties were more concerned with dealing with the changes in the regulatory regime. Right now, firms are catching up. For instance, a recent innovation that allows rail workers to work safely while trains are passing on adjacent tracks has attracted international attention. On the whole, actors contend that the sector is becoming more innovative.

Finally, the interviewees pointed out seven areas related to the current governance setting that could be improved:

1. The sector needs a stable, long-term government vision for public transport.
2. The match between demand and supply is not optimal. Even though the actors in the value chain are relatively autonomous, many other factors predetermine their choices. Stakeholders believe that more freedom to adapt to market demand could improve this situation.
3. Regulators do a poor job at incorporating risks into their decisions; stakeholders would prefer it if these decisions and trade-offs were taken by the actors themselves.
4. Now that the infrastructure and services have – justly – been unbundled, more

co-ordination and a systematic approach are required to address the complex challenges across the value chain.

5. Concessions limit an actor's ability to justify necessary investments, especially when the concession is about to expire. On the basis of this argument, some actors have pleaded for longer concession terms.
6. The system should evolve from a united one to a more flexible network of differentiated services, adapting itself to actual demand and price elasticity and involving all relevant actors including municipalities.
7. The reorganisation of the sector resulted in a brain drain in significant parts of the value chain. Some effort is required to secure knowledge where it is needed if the players in the sector want to compete with their (commercial) suppliers' knowledge.

### **Lessons to be learned for other sectors**

We feel that the railway sector is an interesting example among the wider range of sectors currently being studied by the WRR. In the late 1990s and early 2000s, when the regulator tried to transform this sector from a public utility into a liberalised and privatized sector, performance fell so drastically that the liberalisation and privatisation processes were halted. A new balance was found, with a single concession holder for the main line network, and a Key Performance Indicator system for assessing the performance of the main actors. This new balance has been viewed favourably by the actors involved, even though there is room for improvement. Liberalisation has thus far only been realised in the freight sector and has proven to be successful. All of the actors agree, however, that this is due to the fact that the freight sector has fundamentally different characteristics than passenger transport.

There is no sign of underinvestment in the chosen governance setting. However, the high level of detailed regulatory control continues to hinder an optimal allocation of investments.

## ANNEX 1

### THE POSSIBLE UPGRADE TO THE ERTMS EUROPEAN STANDARD FOR RAILWAY SIGNALLING

Railway safety systems are designed to prevent accidents on the railway network. Since the early days of railways, a system has been used to prevent too many trains from passing through a defined area, called a block. The risk has remained, however, that train operators may fail to observe or respond properly to a danger signal (for example, in adverse weather conditions). To ensure safe operation in the presence of such human failures, many countries have introduced in-train safety systems that warn operators of these errors and eventually automatically bring the train to a stop. In the Netherlands, the ATB safety system was introduced in the 1950s, based on an American design for underground train networks. Full-scale deployment was considerably speeded up after the above-mentioned Harmelen train disaster (92 deaths) in 1962. It was a deliberate design choice that the system would not operate at speeds under 40 km/h. This meant that it was unnecessary to fit all of the railway yards with this system, which would have made the costs prohibitively high. At low speeds, the operator can use his eyes, and the effects of any accidents are limited.<sup>13</sup> ATB is now in use on the entire Dutch network and some improvements have been made over time.<sup>14</sup>

Similar systems to ATB were developed in other countries. Nowadays, more than 20 incompatible railway signalling safety systems are deployed among European countries. The existence of so many different, national systems is seen as an obstacle to the internationalization of rail traffic. The so-called European Rail Traffic Management System (ERTMS) is an EU-backed initiative to enhance cross-border interoperability and signalling procurement by creating a single Europe-wide standard for railway signalling. This should lead to economies of scale and it could help to improve the position of transportation by railway vis-à-vis road transport. By improving interoperability, ERTMS would facilitate cross-border traffic and create a European market for rolling stock<sup>15</sup>. While ensuring a high level of safety, it enables higher train speeds and thus higher traffic density. The ERTMS specifications distinguish several 'levels', each with different architectures and different levels of performance and complexity.<sup>16</sup>

In the Dutch context, the introduction of ERTMS could have yet another significant advantage. The current national safety system does not operate at speeds below 40 km/h. Most of the recent incidents and train collisions occurred exactly because of this detail (see below). Indeed, the Dutch Safety Board stated that it considered this an unsafe condition.<sup>17</sup> Actual deployment of the ERTMS has been slow, although the European Commission is making significant steps to speed this up.<sup>18</sup> The Netherlands is no exception to that slow introduction. Apart from the obligatory introduction on the high-speed Amsterdam-Brussels-Paris line, the freight line Betuwelijn and some pilots on existing tracks, further implementation is not expected before 2010.<sup>19</sup> Total costs for full-fledged implementation

in the Netherlands are still difficult to determine and also depend on the choice of ERTMS implementation and coverage, but will probably range from € 1 to € 2 billion (for both infrastructure and rolling stock). However, other sources quote costs between € 3 billion and € 5 billion.<sup>20 21</sup>

The technical introduction of ERTMS has not only been challenged by a variety of versions, but also by the high number of Design Choices (DC) that suppliers have. However, no budget has been reserved for a short-term deployment of ERTMS for the complete railway network. Instead, ERTMS will be deployed as part of the periodic maintenance and upgrade of the railways. By doing so, full deployment will be reached in approximately two decades (and budgets will be spread out accordingly).

In 2004, the Dutch Parliament expressed a preference for a short-term full deployment of ERTMS. This was rejected by the transportation minister as being too expensive.<sup>22</sup> But the minister did reserve € 40 million to upgrade the current national system, adding provisions to make the system work at lower speeds as well.<sup>23</sup> It is expected that the European Union will subsidize the installation of ERTMS units in rolling stock.<sup>24</sup>

During interviews, stakeholders expressed that, in their view, a timely full-scale introduction of ERTMS cannot be justified. First of all, the level of fatal injuries as a result of train accidents has been very, very low since the introduction of ATB in 1960. In fact, ATB has a very impressive track record. Though accidents can still happen at speeds under 40 km/h, experience shows that trains provide their passengers with sufficient protection at such speeds. To improve safety, the following measures could be taken: (1) improve signal placement and visibility at locations known to be dangerous, (2) adapt train planning (at the cost of system capacity), (3) improve the current signalling system (for example, ATB++), or (4) replace the current signalling (e.g., ERTMS). The first two measures have already been implemented: approximately 1,000 locations have been identified as needing improvement. The third measure is also being adopted (though not fully). The fourth option, ERTMS, is hard to justify. ERTMS does not necessarily make the network that much safer; in fact ERTMS Level 1 does not offer much more than the current systems. It should also be taken into account that there are significant categories of incidents that cannot be addressed by (improved or new) signalling systems. The most obvious are level crossings. If the numbers of casualties in other areas (particularly road transport) are taken into account, it is very hard to justify an expenditure of this size in a sector that has already proven to be safe. According to stakeholders, an over-investment of this scale would result in unnecessarily high costs for a system that is already very safe. All insiders have agreed that there are more effective, more appropriate and more cost-efficient ways of further improving safety, such as identifying the most dangerous locations and adopting extra local measures.

Comments were also made about the ERTMS system itself. Some interviewees have argued that ERTMS has been over-specified. The culmination of the design requirement of all the various rail operators (the networks of which all have unique characteristics) and the ideas of the various suppliers who had interests in integrating their current strengths resulted in an overly complex system. As a result, costs would be higher compared to other systems that are more focused on the functional requirements of a specific rail operator. It has also been mentioned that Level 3, the most advanced planned level of ERTMS, might appear to be the ultimate solution in railway signalling, but it is currently facing many difficult challenges preventing it from actually being realised. Level 3 includes so-called moving blocks (in contrast to the current blocks that are physically defined). Moving blocks make traditional signals superfluous. They allow trains to travel as closely together as possible, while ensuring safety (by continually calculating the braking distance required for two subsequent trains at certain speeds). To do this, they employ continuous radio communication. However, this level requires very exact (satellite) positioning and ERTMS plans to utilize the European Galileo positioning system, which is not (yet) available. This would require not only that the head (front) but also the tail (back) of the train have a system installed, which may be impractical and expensive for freight trains.

The involved actors have emphasised that ERTMS aims at interoperability (especially relevant for international freight transport), not at improving safety. Furthermore, the ongoing developments of ERTMS, expected price reductions and the discussions on what will (and should) become the dominant implementation level, would make it difficult to decide on full-fledged implementation at this time.

Some interviewees, however, have noted that safety deserves more attention. The focus has always been very much on performance and not safety. For instance, the landmark 1988 concept 'Rail-21' proposed to increase the speed limit on many lines to 200 km/h, but did not include a single paragraph on safety. Although this proposal was never implemented, it's obvious that such an increase in speed has a dramatic effect on safety.<sup>25</sup> More recently, a € 70 million package of measures has been proposed to increase speeds on many lines from 140 to 160 km/h. Again, very little attention is paid to safety and no risk analysis was conducted.

## ANNEX 2

### THE POSSIBLE UPGRADE TO A 25KV ENERGY SYSTEM

For historical reasons, power supplies in Dutch trains are based on a 1500 volt DC (Direct Current) overhead wire system. This system was selected in 1922, after a study group evaluated the various alternatives.<sup>26</sup> Newer, more beneficial systems were developed later in the 20<sup>th</sup> century, but Dutch railway connections were so interconnected that the switch to a newer system was never made. Economists sometimes characterise this as path-dependency: earlier choices limit flexibility with regard to the introduction of more efficient systems later on. Meanwhile, in contrast to the Netherlands, many countries have upgraded their systems, by installing 25 kV AC (alternate current).<sup>27</sup> Generally speaking, this AC system allows for higher train speeds and thus shorter travel times<sup>28</sup>, for heavier freight trains and lower energy costs, and it is more environmentally friendly. It also facilitates cross-border traffic. Over the years, there have been several feasibility studies regarding the upgrading of the Dutch railway network to AC. A newer study will be completed in 2007; it will focus on the introduction of a metro-type time schedule, which would be a departure from the well-established fixed timetables. The costs of upgrading to 25 kV are very substantial; in 2005, the Transportation Minister informed Parliament that the estimated budget could top € 10 billion.<sup>29</sup> In her letter, the minister claimed that substantial improvements to the capacity of the railway infrastructure could also be made with less dramatic interventions, including longer platforms, extra tracks for passing, and fewer level crossings. However, similar to the ERTMS situation no funds have thus far been allocated to upgrade the network to 25kV. However, during periodic infrastructure upgrades, provisions have begun to be made to facilitate a later upgrade to 25kV. Rail manager ProRail is expected to include the costs in its annual maintenance budget.

The possible upgrade to 25 kV has been a constant topic of discussion, both within ProRail as well as in public debates. Some people prefer to call it 'an engineer's dream'. Our interviews revealed that stakeholders believe any serious analysis will show that the costs currently overshadow the benefits. The costs are huge, no matter how you look at it. The benefits, however, are considered to be limited, given the short distances between stations and the required mix of local, intercity and freight trains. Moreover, safety may become an important issue: increasing speeds from the current 140 km/h to, for example, 200 km/h may result in substantially higher risks at the numerous level crossings and it is not feasible to replace all of the existing crossings in the network. Concerning cross-border traffic, it should be noted that both Germany and Belgium deviate from the 25 kV standard (Germany uses 15 kV 16 2/3 Hz AC, while Belgium relies on 3 kV DC). Furthermore, the current locomotives that can operate under different voltages (such as Siemens' Eurosprinter and Bombardier's TRAXX locomotives) may serve as an effective solution for cross-border traffic.

## NOTES

- 1 The author would like to acknowledge the interviewees, who were willing to provide an unvarnished view of the Dutch railway sector.
- 2 For an extensive account of the development of railways in the Netherlands, see Veenendaal, 2004.
- 3 Source: 'Minster Peijs: Treinsstoring Utrecht door defecte onderdelen'. FNV Spoor, 19 april 2005.
- 4 For an overview, see NOS (2006), 'Overzicht treinongelukken Nederland', available at: [www.nos.nl/nosjournaal/2006/6/24/overzicht\\_treinongelukken.html](http://www.nos.nl/nosjournaal/2006/6/24/overzicht_treinongelukken.html).
- 5 Apart from that, in economic terms, the railways sector can also be characterised as exhibiting (1) strong economies of scale (large up-front investment), (2) strong network externalities, (3) path-dependence, (4) technical interdependence (hence the need for interoperability), and (5) a complex interaction with other modalities, in particular car transport (though we will not address this issue in this paper). It is also generally recognised that capacity is scarce on the Dutch railway network (see, for instance, Steer Davies Gleave, 2003).
- 6 Below, we will shorten this to the Ministry of transport.
- 7 The government will probably address this resolution in combination with the evaluation of the current Spoorweg- en Concessiewet, due in 2008. For the resolution, see [www.eerstekamer.nl/9324000/1f/j9vvgh5ihkk7kof/vgfc4q8n000](http://www.eerstekamer.nl/9324000/1f/j9vvgh5ihkk7kof/vgfc4q8n000).
- 8 ProRail (2006), pp. 5-75.
- 9 See also: 'NS-topman: 8 miljard nodig voor spoor', *de Volkskrant*, 28 August 2007.
- 10 Ministerie van Verkeer en Waterstaat (2004).
- 11 Ministerie van Verkeer en Waterstaat (2007).
- 12 Source: 'Betuwelijn nog altijd niet in gebruik'. *De Volkskrant*, 1 August 2007.
- 13 Another limitation is that the ATB (in its first generation) does not use braking curves. The system is satisfied once braking has been initiated; the judgement whether this braking effort is sufficient to stop the train in time is left up to the driver.
- 14 Around 2000, a completely new version was developed, dubbed ATB-NG (New Generation). It has been implemented on some lines that had not been fitted with ATB yet. Although this newer system addresses some of the limitations of first generation ATB systems, its introduction was thwarted by ERTMS Level 1, which has about the same functionality and enjoys the status of a European standard.
- 15 Rolling stock is the collective term that describes all the vehicles which move on a railway. It usually includes both powered and unpowered vehicles, for example locomotives, railroad cars, coaches and wagons. The term contrasts with fixed stock, which is a collective term for the track, signals, stations and buildings etc. necessary to operate a railway. Source: <http://en.wikipedia.org>.
- 16 The ERTMS specifications are maintained by the International Union of Railways – also known by its French name, Union Internationale des Chemins de fer (UIC). ERTMS has three versions, called 'levels'. The higher the level, the fewer the investments in track-related equipment and the higher the investments in rolling stock equipment. On levels 2 and 3, the railway-adapted GSM for Railways (GSM-

R) mobile communication system is used. Level three introduces a new architecture and offers full radio-based train spacing, thus increasing the capacity of lines. Level 3 is currently under development, and its implementation would make existing light signals superfluous as it uses moving blocks. Rumours have it that its developments is delayed by firms in the traditional signal market. For low traffic lines, a low-cost version of ERTMS is under development, sometimes referred to as 'level 4'. It uses satellite navigation.

17 Source: <http://nl.wikipedia.org/wiki/ATB-EG>.

18 Among other things, they entrusted a high-level official, Mr Karel Vinck, with the co-ordination of the ERTMS priority project, and are expected to use a subsidy program.

19 [http://nl.wikipedia.org/wiki/European\\_Railway\\_Traffic\\_Management\\_System](http://nl.wikipedia.org/wiki/European_Railway_Traffic_Management_System).

20 Ibid. It is not indicated for which version of ERTMS that is, and how much deployment costs may decrease in the future (prices may fall once adoption reaches a critical threshold).

21 According to [www.elsevier.nl/magazine/artikel/asp/artnr/100843/zoeken/ja/index.html](http://www.elsevier.nl/magazine/artikel/asp/artnr/100843/zoeken/ja/index.html), costs amount between 30.000 and 300.000 euros per kilometre.

22 [http://nl.wikipedia.org/wiki/European\\_Railway\\_Traffic\\_Management\\_System](http://nl.wikipedia.org/wiki/European_Railway_Traffic_Management_System).

23 Although the minister did not explicitly mention these provisions, they are likely to include the introduction of ATB++.

24 See: [http://nl.wikipedia.org/wiki/European\\_Train\\_Control\\_System](http://nl.wikipedia.org/wiki/European_Train_Control_System)

25 This is most evident at level crossings. As the speed of trains increase, both the numbers and the impact of accidents rise. This is caused by decreased reaction times and increased kinetic energy ( $E = \frac{1}{2}mv^2$ ).

26 See Veenendaal, 2004.

27 Some electrified their railway systems later in time, giving them the option to choose 25 kV from the beginning. Other countries gradually moved to such newer systems. The more interconnected the various lines are, the more difficult such a move is.

28 To illustrate this, for a recent world record on train speeds, the French railways temporarily increased the catenary voltage on the test track from the standard 25kV to 31 kV.

29 It has to be noted, however, that these estimates also include a number of network upgrades that are – strictly speaking – not part of the 25kV upgrade as such, but are regarded as desirable to take full benefit of this upgrade. These other upgrades include extra lanes where faster trains can overtake slower trains.

## REFERENCES

- Cantos, P. (2001) 'Vertical relationships for the European railway industry', in *Transport Policy*, vol. 8 (2), 77-83.
- Cantos, P. and J. Campos (2005) 'Recent changes in the global rail industry: evaluating the new regulatory instruments', in *European Transport/Transporti Europei* no. 29, 1-21.
- Cantos, P. and J. Maudos (2001) 'Regulation and efficiency: The Case of European railways', in *Transportation Research, Part A: Policy and Practise*, vol. 35, 459-472.
- Cantos, P., Pastor, J.M. and L. Serrano (1999) 'Productivity, efficiency and technical change in the European railways: a non-parametric approach'. *Transportation* 26 (4), 61-68.
- Commission of the European Communities (2005) 'Communication from the Commission to the European Parliament and the Council on the Deployment of the European Rail Signalling System ERTMS/ETCS', COM (2005) 298 final, SEC (2005) 903.
- Commission of the European Communities, DG Energy & Transport (2005) *ERTMS – Delivering flexible and reliable rail traffic – A major industrial project for Europe*. European Commission. (s.a.) *ERTMS – Delivering flexible and reliable rail traffic*.
- European Parliament (2005) Concept report on the deployment of the European rail signalling system ERTMS/ETCS 2005/2168.
- Hausman, J. and S. Myers (2002) 'Regulating the United States Railroads: The effects of sunk costs and asymmetric risk', *Journal of regulatory economics*, vol. 22, issue 3, p. 287-310.
- Ministerie van Verkeer en Waterstaat (2007) 'Midterm review: beheer en onderhoud spoorwegen, rijkswegen & rijkswaterwegen naar aanleiding van de Plannen van Aanpak Spoorwegen, Rijkswegen en Rijkswaterwegen'.
- Ministerie van Verkeer en Waterstaat & Ministerie van VROM (2004) *Nota mobiliteit: Naar een betrouwbare en voorspelbare bereikbaarheid*.
- Ministerie van Verkeer en Waterstaat (2005) 'Motie Slob cs. (29800 XII, nr. 31)', Kamerbrief van 18 oktober 2005, kenmerk DGP/SPO/U.05.02100.
- Ministerie van Verkeer en Waterstaat (2006) 'Trendanalyse 2005: Trends in de veiligheid van het spoorwegsysteem in Nederland'.
- Ministerie van Verkeer en Waterstaat (2007) 'Antwoorden op de vragen gesteld door de leden Roemer en Jansen (vraagnummer 2060722370)', Kamerbrief van 3 September, 2007, kenmerk venW/DGP-2007/6538.
- Ministerie van Verkeer en Waterstaat (s.a.) 'Plan van aanpak: Beheer en onderhoud'.
- Mulder M., M. Lijesen and G. Driessen (2005) 'Vertical separation and competition in the Dutch rail industry – A cost-benefit analysis'. Paper presented at the Third Conference on Railroad Industry Structure, Competition, and Investments, Stockholm, 21 and 22 October 2005.
- NEA, OGM, University of Oxford, TINA, Erasmus University, TIS (2005) 'Erail monograph Netherlands' commissioned by the European Commission, DG Transport and Energy, Rijswijk, the Netherlands.

- NEA, OGM University of Oxford, TINA, Erasmus University, TIS.pt (2005) 'E-rail monograph Netherlands' commissioned by the European Commission, DG Transport and Energy.
- NMA Vervoerskamer (2006) 'Vervoersmarkten laten werken'.
- OECD (2007) 'OECD Territorial Reviews' Randstad Holland, the Netherlands.
- ProRail (2006) 'Beheerplan ProRail 2007'.
- Rover (2004) *Consumentenjaarverslag openbaar vervoer per spoor*.
- Staatsblad (2003) 'Wet van 23 april 2003, houdende nieuwe algemene regels over de aanleg, het beheer, de toegankelijkheid en het gebruik van spoorwegen alsmede over het verkeer over spoorwegen (Spoorwegwet)'.
- Steer Davies Gleave (2003) 'EU rail liberalisation: Extended impact assessment', Regulatory Overview of the Netherlands commissioned by DG TREN.
- Van de Velde, Didier and Erik Pruijboom (2003) 'First experiences with tendering at the tactical level (service design) in Dutch public transport', paper presented at the 8th Conference on Competition and Ownership in Land Passenger Transport Rio de Janeiro (Brazil), 14-18 September 2003.
- Veenendaal, Guus (2004) *Spoorwegen in Nederland. Van 1834 tot nu*, Amsterdam: Boom.
- Weerdhuizen, E. van (2006) 'Technological innovation in the Dutch rail sector', Masters thesis, Eindhoven University of Technology.

## 2 REGULERING EN INVESTERINGEN IN INFRASTRUCTUUR

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### 2.1 INLEIDING

Deze verkenningstudie is geschreven in het kader van het project ‘Governance van vitale infrastructuren’ van de Wetenschappelijke Raad voor het Regeringsbeleid. Het doel van deze studie is om meer inzicht te krijgen in de invloed van regulering, en daarmee samenhangend: privatisering en liberalisering, op investeringen in infrastructuur in diverse netwerksectoren in Nederland.

#### 2.1.1 FOCUS VAN DE STUDIE

Het gaat in deze studie om sectoren die een vast netwerk vereisen om diensten over te leveren. De netwerkonderdelen in deze sectoren hebben vaak het karakter van een ‘natuurlijk monopolie’, hetgeen betekent dat één onderneming de markt tegen lagere kosten kan bedienen dan twee of meer ondernemingen. Een natuurlijk monopolie komt voort uit eigenschappen van de productietechnologie in combinatie met eigenschappen van de vraag: schaal- en scopevoordelen zijn groot in verhouding tot de vraag. Omdat het efficiënt is vanuit kosten oogpunt om één onderneming te hebben, is concurrentie feitelijk uitgesloten of is het sociaal wenselijk om concurrentie uit te sluiten (vanwege verspillende duplicatie van vaste kosten). Voorbeelden van netwerksectoren met eigenschappen van een natuurlijk monopolie zijn elektriciteitsdistributie, gasdistributie, waterdistributie, het aansluitnet in vaste telefonie en de breedbandtoegang tot internet, regionale kabelnetwerken in omroep, maar ook delen van de transportsector, zoals luchthavens en zeehavens.<sup>1</sup>

Bij afwezigheid van concurrentie moet regulering als het ware de rol van concurrentie overnemen. Het traditionele economische argument voor het reguleren van netwerkondernemingen is dat een ongereguleerde monopolist bij uitblijven van concurrentiedruk zijn prijzen te hoog en zijn productie te laag kiest. Prijsregulering verhoogt de sociale welvaart door prijzen te verlagen (door het opleggen van maximumprijzen), waardoor de vraag en het productievolume toeneemt. Dit is een statisch argument voor regulering dat vooral is gericht op *prijzen* die afnemers betalen op de korte termijn.

Minstens zo belangrijk als prijzen zijn *investeringen*. Investeringsbepalen het prijsniveau op de langere termijn. Uitgestelde of achtergebleven investeringen kunnen tot capaciteitstekorten leiden en deze kunnen dan in het samenspel van vraag en aanbod op langere termijn tot hogere prijzen leiden en aanzienlijke welvaartsverliezen veroorzaken. Aan de andere kant dienen gepleegde investeringen op langere termijn terugverdiend te worden en dit zal over het algemeen

via een opslag in de prijs moeten gebeuren (maar er zijn ook andere manieren, zoals via subsidies). Hierbij dient te worden opgemerkt dat investeringen in netwerksectoren bijzondere eigenschappen hebben vergeleken met de meeste andere investeringen (bijvoorbeeld uitzonderlijke grootte; verzonken karakter; lange *lead times*; reguleringsrisico's – zie sectie 2.4.1 voor meer over deze eigenschappen). Naast langetermijneffecten op prijzen hebben investeringen ook effecten op de kwaliteit van netwerkdiensten. Kwaliteit heeft onder andere betrekking op betrouwbaarheid van dienstverlening, leveringszekerheid, schadelijke effecten voor het milieu en de mate waarin nieuwe of verbeterde diensten worden aangeboden (innovativiteit).

Het gaat in deze studie niet om het stimuleren van investeringen in *alternatieve* infrastructuur. Regulering kan gericht zijn op het bevorderen van concurrentie tussen infrastructuren, als bijvoorbeeld door technologische ontwikkeling of door voortschrijdend economisch inzicht delen van een netwerksector niet langer als natuurlijk monopolie worden beschouwd (Hausman 1999). In deze studie staan factoren centraal die investeringen in infrastructuren beïnvloeden in gevallen van een natuurlijk monopolie (hoewel ook de mogelijke rol van concurrerende infrastructuren zal worden besproken).

### 2.1.2 AANLEIDING VOOR DE STUDIE

Met name in het Verenigd Koninkrijk hebben diverse economen de laatste jaren zorgen geuit over de zeer hoge *gearing ratio* (aandeel van vreemd vermogen in totaal vermogen) van diverse geprivatiseerde nutsbedrijven. Een hoge gearing kan gepaard gaan met onderinvesteringen in infrastructuur, omdat vermogensverschaffers de risico's te hoog vinden. Het kan verder gepaard gaan met een verhoogd risico op faillissement, omdat de steeds terugkomende rentelasten hoog zijn. Het kan zelfs gepaard gaan met een verhoogd risico op ineenstorting van het gehele financiële systeem (*systemic risk*) – of om dat af te wenden, met afwenteling van kosten op eindgebruikers of belastingbetalers.

Ook wordt in het Verenigd Koninkrijk kritiek geuit op zogenaamde *incentive*-regulering, die gereguleerde onderneming efficiëntie prikkels geven. De sterke prikkels om kosten te besparen die van dit type regulering uitgaan, zouden ertoe leiden dat gereguleerde netwerkbedrijven te weinig investeren in infrastructuur. Aangezien het Verenigd Koninkrijk heeft voorgelopen op de rest van Europa met privatisering en liberalisering, is niet uit te sluiten dat de problemen die daar nu worden ervaren, in de rest van Europa in de toekomst zich ook zullen voordoen.

In deze verkenningstudie wordt in de eerste plaats de economische literatuur samengevat die relevant is voor de inschatting of netwerkondernemingen vanuit maatschappelijk oogpunt te weinig investeren in infrastructuur. Vanuit die economische literatuur wordt in het algemeen het risico ingeschat dat er onvoldoende investeringen plaatsvinden in geliberaliseerde netwerksectoren in Nederland.

### 2.1.3 ORGANISATIE

In paragraaf 2.2 worden de voor deze studie belangrijkste relevante hoofdthema's uit de moderne economische reguleringsliteratuur besproken. Hiertoe behoren de economische effecten van privatisering, liberalisering, tariefregulering en het risico op opportunistisch gedrag van een toezichthouder.

Paragraaf 2.3 geeft een overzicht van recente financieringstheorieën, waar met name wordt ingegaan op factoren die de vermogensstructuur en investeringen van private ondernemingen bepalen. Als gevolg van privatisering van netwerkbedrijven worden inzichten uit deze literatuur relevant.

Vervolgens wordt in paragraaf 2.4 ingegaan op verbanden tussen privatisering, liberalisering, regulering en investeringen. Dit is in de economische literatuur een relatief onontgonnen terrein. Er ontstaat echter steeds meer aandacht, ook vanuit de reguleringspraktijk, voor de factoren die investeringen in infrastructuur in gereguleerde netwerksectoren bepalen of beïnvloeden.

Na het weergeven van de economische theorie en het vaststellen van de implicaties ervan voor investeringen in infrastructuur, wordt in paragraaf 2.5 een tweetal belangrijke infrastructuren in Nederland nader bekeken: het vaste net van KPN, waarover diensten als vaste telefonie, breedbandtoegang tot internet en (in toenemende mate) IP-televisie worden geleverd, en het elektriciteitstransportnet van Tennet, waarover elektriciteit van producenten naar distributeurs (en uiteindelijk eindgebruikers) wordt getransporteerd.

Paragraaf 2.6, ten slotte, geeft de conclusies weer, die worden geformuleerd in termen van het borgen van publieke belangen in netwerksectoren.

## 2.2 REGULERINGSTHEORIE

In dit hoofdstuk wordt een viertal thema's uit de moderne reguleringstheorie besproken: (1) privatisering van staatsondernemingen; (2) liberalisering van markten waar voorheen staatsmonopolies bestonden; (3) tariefregulering; en (4) het probleem van de zogenaamde *regulatory opportunism*. Er is juist voor deze thema's gekozen, omdat ze een belangrijke rol spelen bij investeringsbeslissingen van gereguleerde bedrijven in netwerksectoren.

### 2.2.1 PRIVATISERING

Ondanks het feit dat veel privatiseringen van staatsbedrijven, die gedurende de laatste twintig jaar in Europa hebben plaatsgevonden, voor een belangrijk deel op economische gronden en verwachtingen werden doorgevoerd, is er eigenlijk verrassend weinig moderne economische reguleringsliteratuur die in detail en onderbouwd aangeeft wat de voordelen van privatisering zijn en hoe die tot stand komen.

### **Wat is het uitgangspunt?**

Overigens kan men zich afvragen aan welke kant de ‘bewijslast’ voor privaat eigendom ligt. Men zou kunnen stellen dat in een markteconomie privaat eigendom van ondernemingen de uitgangssituatie is en dat de afwijkende situatie van publiek eigendom op overtuigende wijze met argumenten onderbouwd dient te worden. Van de andere kant, echter, zou ook praktischer kunnen worden gesteld dat er nu eenmaal publieke ondernemingen zijn en dat veranderingen in een bestaande situatie juist onderbouwd moeten worden. In de conclusies in dit hoofdstuk wordt verder op deze vraag ingegaan.

### **Vormen van privatisering**

Laffont en Tirole (1993) wijzen erop dat de scheiding tussen publiek en privaat eigendom niet zo scherp is als soms wordt gedacht. Het gedrag van private ondernemingen kan sterk worden bepaald door overheidsregels. Of het bestaansrecht van een private onderneming kan afhangen van een exclusieve overheidsopdracht. Ook kunnen publieke ondernemingen in hoge mate ‘verzelfstandigd’ zijn en zich gedragen alsof ze private ondernemingen zijn. Van Damme et al. (2003) maken een onderscheid tussen drie vormen van privatisering: contracteren, verzelfstandiging en volledige privatisering. Bij contracteren worden diensten die eerst door de overheid werden geleverd uitbesteed aan de private sector. Bij verzelfstandiging wordt een publieke organisatie op *arm’s length* van de overheid gezet en dient zelfstandig te opereren alsof het een private onderneming betreft. Bij volledige privatisering gaat de meerderheid van de aandelen van publieke in private handen.

### **Voor- en nadelen van privatisering**

In het gezaghebbende tekstboek over economische regulering van Laffont en Tirole (1993) worden de volgende (volgens hen veelal vermeende) nadelen van publiek eigendom ten opzichte van privaat eigendom van bedrijven genoemd. Als eerste en belangrijkste nadeel van publiek eigendom wordt naar voren gebracht dat er geen *monitoring* van het management mogelijk is vanuit de kapitaalmarkt. Managers van staatsondernemingen ondervinden zo minder controle op hun prestaties vanuit de kapitaalmarkt. Aandelen worden niet verhandeld en er zijn dus geen aandelenkoersen om informatie uit de toekomstige performance van een onderneming af te leiden. Ook Vickers en Yarrow (1988) benadrukken dit als het belangrijkste verschil tussen publiek en privaat eigendom. Zij stellen hierover dat een verandering van eigendom van publiek naar privaat (of omgekeerd) de prikkels van het management, en daarmee het gedrag van een onderneming, materieel beïnvloedt.

Een tweede nadeel is dat een publieke onderneming een zogenaamde *soft budget constraint* heeft. Een publieke onderneming kan moeilijker failliet gaan dan een private onderneming, en dit legt minder discipline op aan het management. Overigens kan men zich afvragen of een overheid niet ook in zou grijpen indien een geprivatiseerd nutsbedrijf failliet zou dreigen te gaan. In paragraaf 2.5 van deze studie wordt het geval van KPN besproken, waarbij de staat een geprivati-

seerd KPN in 2001 financieel ondersteunde toen de schuldenpositie van KPN slecht was.

Een derde nadeel is dat investeringen door publieke ondernemingen, als ze eenmaal gemaakt zijn, uit politieke overwegingen voor andere doelstellingen van de overheid kunnen worden ingezet. Bestuurders van publieke ondernemingen zouden om die reden minder snel geneigd zijn om te investeren.

Verder is een nadeel van publieke eigendom dat overheidsdoelstellingen vaak veelzijdig zijn en veranderen. De doelstelling van een publieke onderneming is daarmee ook veranderlijk. Dit kan nadelig uitwerken voor langetermijninvesteringen. Publieke ondernemingen zouden hierdoor ook gevoeliger zijn voor politieke lobbygroepen, juist omdat ze meervoudige en veranderende doelstellingen kunnen hebben.

Laffont en Tirole (1993) noemen als voordeel van publieke ondernemingen dat sociale doelstellingen gemakkelijker te bewerkstelligen zijn. Uiteindelijk is het behalen van maximale winst de belangrijkste doelstelling van private ondernemingen. Het vereist verder toezicht van een overheid om een contract voor sociale doelstellingen te bewerkstelligen bij private ondernemingen, terwijl de overheid als eigenaar die bij publieke ondernemingen eenvoudiger kan implementeren.

Een ander voordeel van publiek eigendom is dat er geen conflict ontstaat tussen toezichthouders en eigenaars, omdat dat in beide gevallen de overheid is. Bij privaat eigendom en publiek toezicht is in geval van natuurlijke monopolies een dergelijk conflict onvermijdelijk (private eigenaars willen namelijk monopolieprijzen hanteren en de publieke toezichthouder wil vanuit het oogpunt van sociale welvaart een lagere prijs en minder winst).

**Tabel 2.1 Nationalisering**

Nadelen	Voordelen
Geen druk op management vanuit kapitaalmarkt om kosten te minimaliseren	Specifieke sociale doelstellingen beter te bewerkstelligen
Minder druk op management vanwege 'soft-budget constraint' (risico van faillissement is niet aanwezig)	Minder conflicten tussen belangen aandeelhouders en management
Opportunistisch gedrag door politieke druk om doelstellingen aan te passen	
Opportunistisch gedrag door veelheid en veranderlijkheid van doelstellingen	

Tabel 2.1 geeft een overzicht van de economische na- en voordelen van nationalisering. Dit is synoniem met de voor- en nadelen van privatisering, maar het uitgangspunt is privaat eigendom van ondernemingen.

### **Wanneer privatiseren?<sup>2</sup>**

Volgens Hart, Shleifer en Vishny (1997) zou de keuze tussen publieke en private eigendom van een onderneming in belangrijke mate moeten afhangen van de prikkel om te innoveren.<sup>3</sup> Zij gaan ervan uit dat managers in een private onderneming meer controle en onderhandelingsmacht hebben dan publieke managers. Een private onderneming heeft een sterkere prikkel om twee soorten innovaties tot stand te brengen: kostenreducties en verbeteringen in kwaliteit die niet via contracten te bewerkstelligen zijn (*non-contractible quality*) – kwaliteit kan ook staan voor betrouwbaarheid, leveringszekerheid en effecten op het milieu. De prikkel om kosten te reduceren kan echter zo sterk zijn dat kostenreducties ten koste gaan van kwaliteit.

Hart, Shleifer en Vishny formuleren drie voorwaarden – indien aan één van de drie voorwaarden wordt voldaan, dan is volgens hen privatisering beter dan publieke eigendom. De eerste voorwaarde is dat concurrentie tussen netwerken haalbaar moet zijn. In het geval van natuurlijke monopolies is dat per definitie niet het geval, maar bij ontluikende infrastructurele concurrentie kan wel aan deze voorwaarde worden voldaan. De tweede voorwaarde is dat betrouwbaarheid van het netwerk voldoende contracteerbaar moet zijn. Contracten moeten het risico kunnen afdekken dat private managers te veel in kostenreducties investeren en betrouwbaarheid van het netwerk te veel uit het oog verliezen. Het probleem hier kan zijn dat contracten noodzakelijk ‘incompleet’ zijn en dat daarom niet alle mogelijke omstandigheden vooraf kunnen worden vastgelegd.<sup>4</sup> De derde voorwaarde is dat commerciële en publieke belangen voldoende met elkaar in overeenstemming zijn.

### **Motivatie bij de privatisering van British Telecom**

Oldale en Padilla (2004) doen verslag van de verwachtingen en doelstellingen bij de privatisering van British Telecom (BT) in het Verenigd Koninkrijk. In 1984 was BT een van de eerste telecommunicatiebedrijven die in Europa werden geprivatiseerd. Commentatoren waren over het algemeen zeer optimistisch over de potentiële effecten van deze verandering in eigendom. De verwachting was in de eerste plaats dat privatisering tot lagere kosten zou leiden. Vergeleken met managers in publieke ondernemingen, zo was de gedachte, hebben managers in private ondernemingen duidelijke prikkels om winsten te maximaliseren en kosten te minimaliseren, en komen minder onder druk om andere doelstellingen na te streven.

Verder werd verwacht dat privatisering zou leiden tot meer investeringen in nieuwe technologieën, die er in de jaren tachtig in telecommunicatie duidelijk aankwamen. Eén reden hiervoor was dat consumenten bereid zouden zijn een premie te betalen voor de komende innovaties, en een private onderneming heeft

daarom de prikkel om deze te introduceren. Dit zou te meer gelden, als de gepri-  
vatiseerde onderneming onder concurrentiedruk van andere partijen zou staan.  
Een andere reden hiervoor was de verbeterde toegang tot kapitaalmarkten die  
privatisering tot stand zou brengen. Begin jaren tachtig waren veel Europese  
overheden huiverig om te investeren in overheidsbedrijven, omdat dat een nega-  
tieve impact zou hebben op de overheidsschulden. Deze beperking speelde in het  
bijzonder in het Verenigd Koninkrijk, omdat BT, toen dat nog in staatshanden  
was, geprobeerd had om private financiering binnen te halen, maar hierin niet  
was geslaagd.

### 2.2.2 LIBERALISERING

#### ***Concurrentie als substituut voor regulering***

Liberalisering houdt in dat beperkingen van concurrentie, zoals bijvoorbeeld  
wettelijke toetredingsdrempels, worden weggenomen. Door technologische  
ontwikkelingen maar ook door nieuwe economische inzichten in de jaren zeven-  
tig en tachtig, werden in netwerksectoren potentieel competitieve onderdelen  
onderscheiden van onderdelen van natuurlijke monopolie. De economische  
onderbouwing van liberalisering is dat door de creatie van concurrentie bij de  
potentieel competitieve onderdelen, de sociale welvaart toeneemt, omdat prijzen  
lager worden en diensten efficiënter worden geproduceerd. Aangezien concu-  
rentie op de onderdelen van natuurlijke monopolie niet wenselijk of mogelijk is,  
worden op deze onderdelen ook niet de positieve welvaartseffecten van liberali-  
sering verwacht.

#### ***Herregulering na liberalisering***

Liberalisering impliceert niet dat regulering niet langer nodig is. Regulering dient  
na liberalisering anders te worden vormgegeven ('herregulering'). Vóór liberali-  
sering was tariefregulering gericht op het imiteren van het competitieve prijsni-  
veau. Ná liberalisering is dergelijke tariefregulering op de potentieel competitieve  
onderdelen (na een overgangperiode) uiteindelijk niet langer nodig, want door  
toetreding en toenemende concurrentie zullen prijzen tenderen naar het compe-  
titieve niveau. Regulering van netwerkdiensten, de onderdelen van natuurlijke  
monopolie, daarentegen blijft noodzakelijk. De netwerkeigenaar kan als mono-  
polist excessief hoge tarieven vragen aan afnemers. Verder zijn toetreders in veel  
gevallen volledig afhankelijk van netwerkdiensten om in de geliberaliseerde  
onderdelen van de sector (vaak stroomafwaarts in de concurrentie voor eindge-  
bruikers of stroomopwaarts in de concurrentie in productie) actief te kunnen  
zijn. Regulering van netwerkdiensten, ook wel 'toegangsregulering' (*access regu-  
lation*) genoemd, is daarom niet alleen gericht op het 'corrigeren' van excessieve  
monopolietarieven, maar heeft ook andere doelstellingen, zoals het bevorderen  
van toetreding van minstens zo efficiënte ondernemingen in potentieel competi-  
tieve onderdelen.

### 2.2.3 TARIEFREGULERING

De economische theorie van prijsregulering zoekt naar de optimale manier om excessieve prijzen die een natuurlijk monopolist kan hanteren, te controleren.

#### ***Informatieasymmetrie tussen gereguleerde onderneming en toezichthouder***

Een toezichthouder die maximumtarieven moet vaststellen, ziet zich vaak geconfronteerd met gebrek aan informatie over de hoogte van de kosten en over de inspanningen die de natuurlijk monopolist doet om kosten te reduceren. De natuurlijk monopolist zelf daarentegen heeft deze informatie wel. De moderne reguleringstheorie neemt deze situatie van asymmetrische informatie als uitgangspunt en bestudeert optimale tariefregulering onder deze belangrijke beperking (het toonaangevende eerste artikel was Averch en Johnson, 1962).

De volgende fundamentele afruil (*trade-off*) doet zich in een of andere vorm vaak voor bij het bepalen van de optimale tariefregulering. Aan de ene kant kan regulering er vooral op zijn gericht om overwinsten bij de natuurlijk monopolist weg te halen, maar dit gaat wel ten koste van de prikkel voor de natuurlijk monopolist om kosten te reduceren. Aan de andere kant kan regulering er ook op zijn gericht om de natuurlijk monopolist prikkels te geven om kostenefficiënt te opereren, maar dit laat wel meer overwinsten bij de monopolist.

#### ***Rendementsregulering en incentive-regulering***

Twee categorieën van tariefregulering zijn op deze fundamentele afruil terug te voeren. Ten eerste de zogenaamde rendementsregulering (in het Engels ook wel *rate-of-return* of *cost-plus* regulering genoemd), waarbij de prijzen van een natuurlijk monopolist door de toezichthouder worden vastgesteld op basis van onderliggende kosten plus een redelijk rendement. Ten tweede de zogenaamde *incentive*-regulering, vaak in de vorm van meerjarige tariefplafonds, waarbij voor een langere periode tevoren maximumtarieven worden vastgesteld.

Kenmerken van rendementsregulering zijn dat statische welvaartsverliezen worden geminimaliseerd, omdat overwinsten worden afgeroomd, maar dat weinig prikkels worden gegeven voor kostenbesparingen. Zolang de kosten van investeringen in infrastructuur door de toezichthouder in de *regulatory rate base* worden geaccepteerd (de *regulatory rate base* omvat activa van de natuurlijk monopolist die middels gereguleerde tarieven mogen worden terugverdiend), worden investeringen in infrastructuur volop gestimuleerd. De kosten van deze investeringen worden dan immers via hogere maximumtarieven volledig afgewenteld op de eindgebruikers. Vanwege deze omstandigheid kan rendementsregulering zelfs tot te veel investeringen (overinvesteringen) leiden.

Meerjarige tariefplafonds (*price caps*), waarbij tarieven niet meer dan een vastgesteld percentage per jaar mogen toenemen, zijn het bekendste voorbeeld van *incentive*-regulering. Kenmerken van *incentive*-regulering zijn dat statische welvaartsverliezen weliswaar ontstaan, omdat over de gehele periode niet alle

overwinsten worden afgeroomd. Maar daar staat tegenover dat er volop prikkels zijn voor de natuurlijk monopolist om kostenbesparingen door te voeren en zo kosten-efficiënt mogelijk te zijn. De reden is dat alle extra opbrengsten tussen de maximale tarieven en de lagere kosten, naar de gereguleerde onderneming gaan. Die is de zogenaamde *residual claimant*. *Incentive*-regulering kan leiden tot te weinig investeringen (onderinvesteringen) in infrastructuur. De reden is dat de investeringskosten niet een-op-een via prijzen op afnemers worden afgewenteld, maar feitelijk ten koste gaan van de winst van de natuurlijk monopolist zelf. Onder *incentive*-regulering bestaat die winst immers uit het verschil tussen opbrengsten en de onderliggende kosten – hogere investeringskosten gaan zo direct ten koste van de winst.

Samengevat worden bij rendementsregulering de kosten en risico's van investeringen vaak niet gedragen door de onderneming zelf maar door eindgebruikers, terwijl bij *incentive*-regulering de kosten en risico's door de onderneming zelf, en met name door haar aandeelhouders, worden gedragen.

### **Classificatie van tariefregulering en contracten in de praktijk**

In de onderstaande tabel wordt een overzicht gegeven van de manier waarop met natuurlijke monopolies kan worden omgegaan. De horizontale dimensie geeft aan of een transfer van de overheid naar de gereguleerde onderneming mogelijk is of niet. Bij een transfer kan gedacht worden aan een subsidie of het anderszins ontvangen van publiek geld. Bij de meeste geprivatiseerde en gereguleerde ondernemingen is een dergelijk transfer niet toegestaan. Bij publieke organisaties is een dergelijke transfer vaak wel toegestaan; vaak gaat het dan om de overheid als enige koper van een bepaalde dienst. Denk bijvoorbeeld scholen die van de overheid een jaarlijks budget krijgen in ruil voor het aanbieden van scholingsdiensten.

**Tabel 2.2 Basistypen regulering en contracten**

	Transfer toegestaan?	
<b>Kracht ('power')</b>	Nee (meeste private, gereguleerde ondernemingen)	Ja (aanbestedingen, meeste publieke ondernemingen)
Zeer groot (bedrijf 'residual claimant')	Tariefplafonds	'Fixed-price' contracten
Gemiddeld (kosten of winstdeling)	'Incentive' regulering	'Incentive' contracten
Zeer klein (overheid of consumenten 'residual claimant')	'Cost-of-service' regulering	'Cost-plus' contracten

Op basis van Laffont & Tirole (1994)

De verticale dimensie in de tabel geeft de zogenaamde ‘kracht’ (*power*) van de regulering of contract aan: hoe groter de kracht van een schema, hoe sterker het verband tussen de transfer die de onderneming krijgt of de prijzen die de onderneming rekent, en de performance met betrekking tot kosten en winst. Tariefplafonds, bijvoorbeeld, hebben een grote kracht (*high-powered*), omdat er voor de gereguleerde onderneming een sterk verband is tussen haar winst en de inspanning die ze levert om de kosten te verlagen. De kracht bij *cost-plus*-contracten, daarentegen, is beperkt (*low-powered*), omdat de inkomsten van de onderneming niet afhankelijk zijn van de mate van inspanningen om kosten laag te houden.

De parallellen tussen reguleringsvormen bij geprivatiseerde ondernemingen en de contractvormen bij publieke ondernemingen bevestigen nog eens dat het onderscheid tussen privaat en publiek eigendom niet zo groot is als soms wordt gedacht.

#### 2.2.4 OPPORTUNISTISCH GEDRAG VAN TOEZICHTHOUDERS (REGULATORY OPPORTUNISM)

##### Wat is ‘regulatory opportunism?’

Met ‘*regulatory opportunism*’ wordt het risico bedoeld dat toezichthouders op eerder gemaakte afspraken terugkomen en gereguleerde ondernemingen niet toestaan eenmaal gemaakte vaste en verzonken kosten terug te verdienen. Dit probleem speelt vooral bij geprivatiseerde ondernemingen die worden gereguleerd. Een gereguleerde onderneming anticipeert dit gedrag van de toezichthouder en zal niet, of minder, geneigd zijn te investeren. ‘*Regulatory opportunism*’ werkt dus verlamdend op het plegen van investeringen, terwijl die investeringen wel wenselijk zijn vanuit sociaal oogpunt. Toezichthouders kunnen proberen om via een strategie van *commitment* zichzelf beperkingen op te leggen om ‘*regulatory opportunism*’ te voorkomen. Hierbij gaat het erom om op een geloofwaardige manier opportunistisch gedrag bij voorbaat uit te sluiten, door ervoor te zorgen dat het opleggen van lagere tarieven niet langer mogelijk of optimaal is, ook niet nadat de gereguleerde onderneming kosten heeft verzonken. Het is een van de grootste uitdagingen van reguleringsbeleid op het gebied van investeringen, om een dergelijk ‘*commitment device*’ te vinden.

Bij publieke ondernemingen speelt het ‘*regulatory opportunism*’ minder, omdat ze doorgaans minder strikt worden gereguleerd, zodat er meer mogelijkheden zijn om investeringen terug te verdienen. Publieke ondernemingen kennen dan weer wel het probleem van veranderlijkheid van doelstellingen, hetgeen ook tot moeilijkheden bij het terugverdienen van vaste kosten kan leiden.

##### Groot risico van ‘regulatory opportunism’ in netwerksectoren

In netwerksectoren is het vooruitzicht van opportunistisch gedrag door toezichthouders in de theoretische literatuur al lang erkend als een belangrijk risico. Netwerkactiva zijn geografisch specifiek (een bepaalde pijpleiding ligt vast in de grond), ze zijn verzonken en ze vertonen grote schaal- en scopevoordelen. Deze

eigenschappen zorgen ervoor dat substantiële *quasi-rents* (de marge tussen prijzen en variabele kosten waaruit de vaste kosten moeten worden goedgeemaakt) ontstaan nadat investeringen zijn gedaan. Deze eigenschappen, gekoppeld aan een zeer wijdverspreide binnenlandse consumptie, maken dat de prijzen van netwerkdiensten inherent politiek van aard zijn. Daarbij komt dan nog dat overheden de mogelijkheid en de motivatie hebben om zich opportunistisch te gedragen. Het niet toelaten aan de gereguleerde onderneming om zijn verzonken kosten terug te verdienen kan aantrekkelijk zijn voor de overheid indien de kosten ervan (bestaande uit reputatieverlies en het ontmoedigen van toekomstige investeringen door de netwerkbedrijven) klein zijn in verhouding met de opbrengsten (het bewerkstelligen van herverkiezing door het reduceren van prijzen van nutsdiensten en het aanpakken van de monopolist).

### **Empirische literatuur**

Lyon en Mayo (2000) onderzoeken of opportunistisch gedrag van toezichthouders in de elektriciteitssector in de Verenigde Staten in de jaren tachtig heeft plaatsgevonden en wat de effecten ervan zijn geweest. Met behulp van een econometrische analyse stellen ze vast dat er dergelijk gedrag heeft plaatsgevonden in kerntechnologie, maar niet in andere technologieën die werden gebruikt om elektriciteit op te wekken. Ze vinden dat dit een gemengd effect had op investeringen. Investeringsplannen werden gereduceerd nadat de toezichthouder bepaalde kosten niet toestond in de tarieven). Het gedrag had echter geen uitstralingseffecten naar investeringen in andere technologieën; deze namen zelfs toe, omdat er een verschuiving van kapitaalintensieve kerntechnologie naar andere productietechnologieën plaatsvond.

In een recentere studie vinden Fremeth en Holburn (2006) ook empirische ondersteuning voor het bestaan van opportunistisch gedrag van toezichthouders. Het gaat wederom om de elektriciteitssector in de Verenigde Staten. Ze bestuderen veranderingen in maximumtarieven na tariefonderzoeken bij 190 elektriciteitsbedrijven tussen 1980 en 2000. Er zijn economische en technologische factoren die tariefveranderingen kunnen verklaren. Waar deze factoren de veranderingen niet kunnen verklaren, schrijven Fremeth en Holburn ze toe aan opportunistisch gedrag van toezichthouders, onder invloed van politieke druk of druk van lobby groepen.

## **2.2.5 CONCLUSIE**

De moderne reguleringstheorie heeft minder aandacht gehad voor een uitgebreide economische onderbouwing van de effecten van privatisering en liberalisering, hoewel de basisargumenten wel naar voren zijn gebracht. Er is meer aandacht geweest voor problemen die zich kunnen voordoen bij tariefregulering. Het eerste probleem is asymmetrische informatie tussen een toezichthouder en een gereguleerde onderneming, bijvoorbeeld over het kostenniveau en de inspanningen van de gereguleerde onderneming om dat kostenniveau te verlagen. Dit

leidt uiteindelijk tot twee basistypen tariefregulering: rendementsregulering en *incentive*-regulering. Het tweede probleem is de moeilijkheid om volledige contracten tussen een toezichthouder en de gereguleerde onderneming af te sluiten. Deze contractuele problemen kunnen tot opportunistisch gedrag van een toezichthouder leiden.

## 2.3 FINANCIERINGSTHEORIE

In een recent toonaangevend tekstboek over financiering van ondernemingen wordt *corporate finance* gedefinieerd als dat wat te maken heeft met “... *ways in which the suppliers of finance to corporations assure themselves of getting a return on their investment*” (Tirole, 2006). Verschaffers van kapitaal aan ondernemingen vallen uiteen in twee groepen: verschaffers van vreemd vermogen (schuld) en verschaffers van eigen vermogen (aandelen). De financieringstheorie bestudeert de factoren die de vermogensstructuur van een onderneming bepalen, dat is de verhouding tussen eigen en vreemd vermogen.

Er zijn ten minste twee redenen om moderne financieringstheorie te bespreken in deze verkenningsstudie. Ten eerste is in het Verenigd Koninkrijk zorg geuit over onderinvesteringen in netwerksectoren op basis van de veranderingen in de vermogensstructuur (richting een hoge *gearing* – dat is, relatief veel vreemd vermogen) van geprivatiseerde netwerk bedrijven. Dit is de aanleiding voor deze studie (zie sectie ). Ten tweede zegt de financieringstheorie meer over de effecten van privatisering. Bij ondernemingen in overheidshanden spelen de hier genoemde factoren een minder belangrijke rol; juist door privatisering gaan ze een rol spelen.

### 2.3.1 STARTPUNT: HET ‘IRRELEVANTIE THEOREMA’

De moderne financieringstheorie begint met het toonaangevende artikel van Modigliani en Miller (1958) over de optimale vermogensstructuur van een onderneming. Zij leiden onder een aantal vrij strikte veronderstellingen af dat de vermogensstructuur van een onderneming geen invloed heeft op de waarde van de onderneming. Met andere woorden, er is geen unieke optimale vermogensstructuur; elke combinatie van vreemd en eigen vermogen optimaliseert de ondernemingswaarde. De veronderstellingen om dit resultaat te verkrijgen zijn afwezigheid van belastingen, geen kosten van faillissement, geen asymmetrische informatie, en efficiëntie van kapitaalmarkten.

Ondanks de op het eerste gezicht opmerkelijke resultaten is het artikel van Modigliani en Miller (1958) een uiterst belangrijke bijdrage geweest, omdat het de onderzoeksagenda voor decennia daarna heeft bepaald – tot op de dag van vandaag. Sinds Modigliani en Miller zijn de volgende financieringstheorieën over de optimale vermogensstructuur ontwikkeld: de afruiltheorie (*trade-off theory*); de principaal-agenttheorie; de pikordetheorie (*pecking order theory*); en de *market timing*-theorie. Elk van deze theorieën zal kort worden toegelicht.

### 2.3.2 AFRUILTHEORIE

In een later artikel laten Modigliani en Miller (1963) een van de veronderstellingen in hun eerdere model los, te weten dat er geen belastingen worden geheven. In Modigliani en Miller (1963) wordt ervan uitgegaan dat rentelasten van vreemd vermogen aftrekbaar zijn voor de vennootschapsbelasting. Dit zou betekenen dat ondernemingen een voorkeur krijgen voor vreemd vermogen boven eigen vermogen bij het kiezen van hun vermogensstructuur. Echter, als ook aspecten van faillissement worden meegenomen, is een groot aandeel vreemd vermogen niet langer ideaal. Hoe meer met vreemd vermogen wordt gefinancierd namelijk, hoe groter de kans is op faillissement. De reden is dat rentelasten, een vorm van terugkerende kosten, toenemen en een groter beslag leggen op de inkomsten. Om deze reden zal het ook investeringen ontmoedigen. Bij tegenvallende inkomsten kan bij een groot aandeel vreemd vermogen al snel de situatie ontstaan dat een onderneming niet meer aan haar verplichtingen aan crediteuren kan voldoen. Verschaffers van eigen vermogen (eigenaars) kunnen in dat geval een faillissement inroepen. Vanwege de beperkte aansprakelijkheid die aandeelhouders genieten worden de risico's voor henzelf beperkt en laten ze alle risico's aan crediteuren (Brealey en Myers 1984). Verschaffers van vreemd vermogen zullen deze risico's tevoren inschatten en een hogere vergoeding eisen indien het aandeel van vreemd vermogen hoger is.

Er is dus een afruil tussen enerzijds belastingvoordelen van vreemd vermogen, en anderzijds een grotere kans op faillissement (en de kosten die daarmee samenhangen). Volgens de afruiltheorie wordt de vermogensstructuur van ondernemingen bepaald door deze afruil.

Bij netwerkbedrijven kan een hoge *gearing* (dat wil zeggen, relatief veel vreemd vermogen) naast een verhoogd risico op faillissement nog andere potentiële problemen veroorzaken. Ten eerste is het waarschijnlijk dat bij faillissement uiteindelijk de afnemers of belastingbetalers de rekening zullen betalen, vanwege de publieke functies van netwerkbedrijven. Ten tweede houdt een hoge *gearing* in dat de prikkels om efficiënt te opereren kleiner zijn, omdat er minder druk is vanuit aandeelhouders om efficiënt te opereren; verschaffers van vreemd vermogen oefenen deze druk in mindere mate uit, omdat het hen in de eerste plaats te doen is om het ontvangen hun verschuldigde interesten. Tenslotte kan het moeilijker zijn voor een onderneming met een hoge *gearing* om kapitaal te verwerven op de kapitaalmarkt.

### 2.3.3 PRINCIPAAL-AGENTTHEORIE

In het midden van de jaren zeventig ontwikkelen Jensen en Meckling (1976) de principaal-agenttheorie van vermogensstructuur. Deze theorie bestudeert situaties waarbij een persoon of organisatie (de agent) optreedt namens een andere persoon of organisatie (de principaal) (Milgrom en Roberts 1992). Het probleem voor de principaal is om de agent zodanig te motiveren dat die zijn belangen goed

behartigt, want die belangen kunnen uiteenlopen. Incomplete en asymmetrische informatie zorgt ervoor dat de principaal niet rechtstreeks de acties van de agent kan beoordelen. Principaal-agenttheorieën zijn toegepast op een aantal gebieden waaronder de relatie tussen werkgevers en werknemers.

In financiering zijn de volgende actoren relevant voor de vermogensstructuur: bestuurders van ondernemingen (dit zijn de agenten), aandeelhouders (verschaffers van eigen vermogen) en schuldeisers (verschaffers van vreemd vermogen) (dit zijn de principalen). Belangentegenstellingen tussen bestuurders en aandeelhouders kunnen er bijvoorbeeld uit bestaan dat bestuurders de neiging hebben om te overinvesteren (aan *empire building* te doen), ook in projecten die niet in het belang zijn van aandeelhouders. Een manier om overinvesteringen te beperken is schuldfinanciering, omdat de bijkomende rentelasten bestuurders dwingen om investeringen te kiezen die cash genereren.

Bij geprivatiseerde en gereguleerde ondernemingen zijn de principaal-agentrelaties beargumenteerbaar nog complexer dan bij niet-gereguleerde ondernemingen. De belangrijkste reden is dat er meer principalen zijn met meer uiteenlopende wensen. De aandeelhouders als principaal hebben als doelstelling winstmaximalisatie, terwijl een (goedwillende) toezichthouder een vorm van welvaartsmaximalisatie als doelstelling heeft. In paragraaf 2.4.6 wordt hier verder op ingegaan. Deze relaties zijn bijzonder complex vergeleken met de situatie waarbij de onderneming in handen is van de overheid.

#### 2.3.4 PIKORDETHEORIE

Midden jaren tachtig werd de pikordetheorie van vermogensstructuur ontwikkeld door (Myers en Majluf 1984). Volgens de pikordetheorie hebben ondernemingen (kapitaalvragers) een volgorde van voorkeuren voor financieringsmiddelen. Deze voorkeursvolgorde loopt van financiering uit interne middelen (startkapitaal of ingehouden winsten) via leningen naar langetermijnobligaties en uiteindelijk naar eigen vermogen. De reden achter deze voorkeursvolgorde is het optreden van informatieasymmetrie tussen vermogensverschaffers en ondernemingen. Informatieasymmetrie veroorzaakt fricties en kosten en gaat zo ten koste van de waardering van de claims die een onderneming uitgeeft. Een onderneming streeft ernaar om zoveel mogelijk financieringsbronnen te hebben die zo min mogelijk beïnvloed worden door informatieasymmetrie. Bij interne financiering is er geen sprake van asymmetrische informatie en heeft daarom de eerste voorkeur voor bedrijven. Aandelen zijn claims met een hoge informatie-intensiteit (informatieasymmetrie tussen ondernemingen en aandeelhouders is het grootst), en worden daarom het minst geprefereerd. Een onderneming zal daarom zoveel mogelijk intern financieren. Als interne financieringsbronnen zijn uitgeput, dan wordt aanspraak gemaakt op schuldfinanciering; als die bron vervolgens ook is uitgeput, dan volgt financiering via eigen vermogen.

Ook hier geldt dat privatisering en regulering waarschijnlijk het effect hebben relaties complexer te maken (voor zover de auteur bekend is er niet expliciet onderzoek naar gedaan). Dit heeft waarschijnlijk tot gevolg dat de informatieasymmetrie tussen vermogensverschaffers en gereguleerde ondernemingen groter is dan in geval van niet-gereguleerde ondernemingen. Het aantrekken van kapitaal brengt dan meer fricties en kosten met zich mee. Om die reden valt niet uit te sluiten dat er een bepaalde groep investeringen is die niet door geprivatiseerde en gereguleerde ondernemingen worden gepleegd, maar die wel door niet-gereguleerde ondernemingen zouden worden gepleegd.

### 2.3.5 MARKETING TIMING-THEORIE

Een recente theorie is de zogenaamde *market timing*-theorie van kapitaalstructuur, zoals beschreven in Baker en Wurgler (2002). Kort gezegd komt deze theorie erop neer dat ondernemingen aandelen uitgeven in tijden van hoogconjunctuur wanneer aandelenkoersen hoog staan; en dat ze aandelen zelf terugkopen in tijden van laagconjunctuur wanneer koersen laag zijn. Schuld of financiering van vreemd vermogen daarentegen neigt ernaar *countercyclical* te zijn: tijdens recessies gaan bedrijven eerder naar banken voor financiering. Deze *timing* van aandeeluitgifte en bankfinanciering heeft structurele effecten op de vermogensstructuur van ondernemingen.

Het is moeilijk om een direct verband te leggen tussen de *market timing*-theorie en privatisering en regulering van netwerkondernemingen. Een mogelijke implicatie van deze theorie zou kunnen zijn dat privatisering juist in tijden van hoogconjunctuur wordt uitgevoerd, omdat de overheid dan het meest verdient aan de verkoop van haar aandelen. Een andere implicatie zou kunnen zijn dat juist in tijden van laagconjunctuur een hoge *gearing* van een netwerkbedrijf risicovol is, omdat verdere financiering via vreemd vermogen dan moeilijker is.

### 2.3.6 PRODUCTMARKTCONCURRENTIE EN VERMOGENSSTRUCTUUR

De laatste theorie van vermogensstructuur die hier besproken wordt legt verband tussen de productmarkt, met name de mate van concurrentie op die productmarkt, en de vermogensstructuur van een onderneming. In een toonaangevend artikel gaan Brander en Lewis (1986) in op deze relatie. De basisidee is dat door het aangaan van een risicodragende schuld een onderneming een agressiever profiel krijgt in de productmarkt. Dit agressievere gedrag kan een strategisch voordeel opleveren voor die onderneming, omdat concurrenten hier rekening mee houden, hun concurrentiestrategie aanpassen en minder agressief zullen concurreren. Bedrijven signaleren door de keuze van vermogensstructuur op een geloofwaardige manier aan hun concurrenten dat ze op een bepaalde manier zullen concurreren.

Er zijn kosten verbonden aan het signaleren van een agressief profiel. Door de hoge *gearing* kunnen langetermijninvesteringen in gevaar komen. Dit aspect wordt in Brander en Lewis (1986) niet meegenomen. In paragraaf 2.4.6 worden

Brander en Lewis (1986) als uitgangspunt genomen voor een theorie (Spiegel en Spulber 1994) die daarnaast ook nog de invloed van regulering analyseert.

### 2.3.7 CONCLUSIE

De verschillende financieringstheorieën die hiervoor zijn beschreven hebben betrekking op private ondernemingen in het algemeen. Als het gaat om ondernemingen die werden geprivatiseerd en waarop toezicht wordt gehouden door specifieke markttoezichthouders, kunnen specifieke factoren en omstandigheden een rol spelen in de keuze van de vermogensstructuur. Voor zover mogelijk is dat al in dit hoofdstuk aangegeven; het volgende hoofdstuk gaat er verder op in.

## 2.4 INVESTERINGEN IN GEREGULEERDE INFRASTRUCTUUR

In dit hoofdstuk worden de rol van privatisering, liberalisering en regulering bij overwegingen van een gereguleerde onderneming om, en in elke welke mate, te investeren, verder besproken. Doelstelling is om na te gaan of er in theorie redenen zijn om te veronderstellen dat er onderinvesteringen of overinvesteringen te verwachten zijn in netwerkinfrastructuren.

Het theoretische ijkpunt van het *optimale investeringsniveau* is als volgt bepaald. Van onderinvesteringen is sprake als een toename van de investeringen de sociale welvaart zou verhogen; de prijsverhoging die nodig is om de extra investeringen te bekostigen zou dan opwegen tegen de toename in surplus bij consumenten, bijvoorbeeld omdat meer consumenten aangesloten worden of omdat dienstverlening betrouwbaarder wordt of de leveringszekerheid hoger. De sociale welvaart kan hier betrekking hebben op statische efficiëntie, dat wil zeggen de optimale aanwending van middelen op een gegeven moment in de tijd. Maar het kan ook betrekking hebben op dynamische efficiëntie, dat wil zeggen op het totale surplus over de tijd heen. Van overinvestering is sprake als een reductie van investeringen zou leiden tot een verbetering van de sociale welvaart, in statisch en dynamisch opzicht.

De economische literatuur toont aan dat privatisering, liberalisering en regulering, en ook vermogensstructuur, investeringen in infrastructuur op de volgende manieren kunnen beïnvloeden:

- Investeringen in netwerkinfrastructuren hebben *bijzondere eigenschappen*; financiering van dergelijke investeringen heeft speciale vereisten.
- *Privatisering* heeft invloed op de mate van investeringen; er zijn gevallen waarin privatisering niet tot de gewenste investeringen leidt, terwijl nationalisering dat wel doet.
- *Liberalisering* heeft invloed op de mate van investeringen; verticaal geïntegreerde netwerkoncernen kunnen door liberalisering efficiëntievoordelen verliezen en dit kan een indirect effect hebben op de mate van investeringen.

- *Tariefregulering*, en preciezer de vorm die tariefregulering aanneemt, heeft invloed op de prikkels van gereguleerde ondernemingen om te investeren in infrastructuur.
- Tariefregulering heeft niet alleen invloed op de hoogte van investeringen, maar ook op de *timing* ervan.
- Gereguleerde ondernemingen reageren via hun investeringen en vermogensstructuur op de manier waarop regulering plaats vindt. *Gebrek aan 'commitment' van de toezichthouder* om niet toe te geven aan opportunistisch gedrag nadat investeringen zijn gepleegd, kan ertoe leiden dat een onderneming een bepaalde vermogensstructuur kiest (nl. relatief veel vreemd vermogen) om gereguleerde prijzen hoog te houden. Dit heeft negatieve effecten op het investeringsniveau.

Elk van deze verbanden zal hieronder verder worden toegelicht.

#### 2.4.1 SPECIFIEKE EIGENSCHAPPEN VAN INVESTERINGEN IN INFRASTRUCTUUR

Guthrie (2006) wijst erop dat in het algemeen investeringsrisico's voortkomen uit fluctuaties in de kosten van een investeringsproject en fluctuaties in de waarde van het voltooide project. Kostenschokken ontstaan door onzekerheid over inputprijzen waarover de onderneming geen controle heeft, projectspecifieke technische schokken en schokken in de tijd die het kost om het project af te ronden. Waardeschokken kunnen bijvoorbeeld ontstaan door vraagveranderingen of veranderingen in regulering.

Vanwege de volgende eigenschappen van investeringen in infrastructuur zijn deze risicofactoren in belangrijke mate aanwezig of worden versterkt in netwerksectoren (Van Dijk 2001).

- Investerings in infrastructuur zijn 'verzonken' (ook wel *irreversible* of onomkeerbaar genoemd) nadat ze zijn gepleegd.
- Onder bepaalde vormen van regulering worden investeringen in infrastructuur gekenmerkt door asymmetrische risico's.
- Investerings in infrastructuur kennen lange *lead times* ofwel een lange tijdsduur tussen de start en ingebruikneming van de investering.
- Investerings in infrastructuur hebben een lange fysieke levensduur.
- Investerings in infrastructuur zijn *lumpy* in de zin dat capaciteitsuitbreidingen moeilijk geleidelijk kunnen plaatsvinden, maar vaak in grote stappen dienen te gebeuren.
- Investerings in infrastructuur vinden plaats in een marktomgeving waar extra risico's ontstaan door liberalisering en regulering.

Elk van deze eigenschappen wordt hieronder toegelicht.

##### **Verzonken kosten**

De risico's die altijd spelen bij investeringsprojecten wegen nog zwaarder waar het investeringen betreft die onomkeerbaar of verzonken zijn. Investerings in

netwerksectoren zijn over het algemeen in hoge mate verzonken (Guthrie 2006). Dit wil zeggen dat de activa zo specifiek zijn in één bepaalde aanwending dat het onwaarschijnlijk is dat er mogelijkheden zijn voor alternatief gebruik, zeker niet in de hoeveelheden die worden afgezet in nutssectoren. Gedane investeringen kunnen maar op één manier worden terugverdiend en dit verhoogt het risico. Hausman en Myers (2002) en Hausman (1999) illustreren dit aan de hand van de spoorweg- en telecommunicatiesector en beargumenteren dat regulering van bedrijven in deze sectoren in de Verenigde Staten onvoldoende oog heeft voor de specifieke investeringsrisico's die door het verzonken karakter van de investeringen worden veroorzaakt.

### **Asymmetrische risico's**

Een andere punt dat Hausman en Myers (2002) naar voren brengen is dat regulering asymmetrische risico's kan veroorzaken. Daarmee wordt het volgende bedoeld. Waar investeringen van netwerkeigenaren succesvol zijn worden 'overwinsten' afgeroomd door een toezichthouder middels lagere tarieven, terwijl daar waar investeringen onsuccesvol blijken te zijn er vaak geen ruimte is voor een opslag in de gereguleerde tarieven. Gans en King (2003) refereren hieraan als het *truncation problem*<sup>5</sup>: de *upside* van een investering, dat wil zeggen de extra opbrengsten uit een succesvolle investering, worden achteraf (*ex post*) afgeknepen via strengere regulering, terwijl de *downside*, zeg maar een mislukte investering die minder opbrengsten genereert, niet leidt tot minder strenge regulering. Dit maakt de risico's van een investering voor een netwerkeigenaar asymmetrisch en leidt ertoe dat hij vooraf (*ex ante*) minder bereid is tot investeringen.

### **Lange lead times**

Veel investeringen in infrastructuur zijn *upfront*, dat wil zeggen dat er aanzienlijke negatieve cashflows zijn in de startfase van een project en dat positieve cashflows pas na enige tijd op gang komen. Deze lange *lead times* stellen bedrijven bloot aan het risico dat economische omstandigheden veranderen tijdens de constructie, met als gevolg dat de eenmaal geconstrueerde activa onvolledig worden bezet.

### **Lange fysieke levensduur**

Investeringen in netwerksectoren hebben vaak een lange tijdshorizon. Veel van de activa in infrastructuursectoren als telecommunicatie, gas, elektriciteit en water hebben een economische levensduur van veertig jaar of meer. Dat maakt dat ook de terugverdientijd van investeringen lang is. Door de lange fysieke levensduur van infrastructurele activa lopen eigenaars het risico dat regulering verandert vóórdat de projectkosten zijn terugverdiend. Langdurige contracten met afnemers om meer zekerheid te geven bij het terugverdienen van de investeringen zijn over het algemeen niet mogelijk. Daar staat dan weer tegenover dat juist in deze sectoren er vaak een grote 'vraagzekerheid' is bij gebrek aan alternatieven, hetgeen tot een lage prijselasticiteit leidt en een stabiele cash in-flow. Dit beperkt de risico's. Maar het grootste risico dat samenhangt met de lange levensduur is waarschijnlijk het reguleringsrisico.

Reguleringsperiodes variëren doorgaans van een tot vijf jaar en zijn daarmee aanzienlijk korter dan de levensduur van infrastructurele activa. Dit levert een rijke voedingsbodem op voor het *regulatory commitment*-probleem zoals besproken in paragraaf 2.2.4. De kritieke vraag in dit verband is wat een toezicht-houder ervan weerhoudt om, nadat investeringen zijn gepleegd en nadat een reguleringsperiode voorbij is, de verzonken kosten niet of onvoldoende mee te nemen bij het vaststellen van maximumtarieven in de volgende reguleringsperiode. Als dit commitment-probleem onvoldoende wordt opgelost, zullen investeringen zich op een suboptimaal niveau bevinden.

### **Lumpy karakter van investeringen**

Investeringen in infrastructuur zijn vaak relatief groot. Deze grootte hangt samen met de historische publieke taak van veel nutsectoren om de gehele bevolking te voorzien van diensten met landelijk dekkende infrastructures (denk bijvoorbeeld aan publieke vaste telefonie, energie- en waterdistributie). De investeringen worden verder gekenmerkt door schaalvoordelen, hetgeen met zich meebrengt dat het te kostbaar wordt om investeringsrisico's te beperken door kleinere toevoegingen aan capaciteit. Om deze reden zijn investeringen in infrastructuur vaak *lumpy*. Dit *lumpy* karakter verhoogt het investeringsrisico.

Turvey (2000) wijst er verder op dat het *lumpy* karakter van investeringen in infrastructuur ook complicaties kan veroorzaken bij tariefstelling. Indien een infrastructuur tegen zijn capaciteitsgrenzen aanloopt, zou het vanuit economisch oogpunt optimaal zijn de vraag te rantsoeneren via hogere prijzen, om de prijzen weer te verlagen nadat de capaciteitsuitbreiding effectief is. Tariefregulering laat deze veranderingen in prijsstelling over het algemeen niet toe en dit kan ertoe leiden dat investeringen in infrastructuur niet van de grond komen waar die sociaal gezien wel wenselijk zijn.

In Tabel 2.3 worden de eigenschappen van infrastructuurinvesteringen samengevat en de invloed ervan op investeringsrisico's aangegeven.

**Tabel 2.3 Eigenschappen van investeringen in infrastructuur**

Eigenschap	Impact op investeringsrisico
Verzonken kosten	+
Asymmetrie van 'up-' en 'downside' risico	+
Lange 'lead times'	+
Lange fysieke levensduur en geen lange termijn contracten	+
'Lumpy' capaciteitsaanpassingen	+
Inelastische vraag en stabiele 'cash in-flow'	-

'+' geeft aan dat het risico toeneemt; '-' geeft aan dat het risico afneemt

Geconcludeerd mag worden dat deze eigenschappen de investeringsrisico's over het algemeen doen toenemen. Om investeringen voldoende te stimuleren zouden er tegenover deze extra risico's ook extra opbrengsten moeten staan om kapitaalverschaffers te overtuigen. Aangezien opbrengsten via tariefregulering over het algemeen van boven worden begrenst, is er omwille van de specifieke investeringseigenschappen een verhoogd risico dat er onvoldoende in infrastructuur wordt geïnvesteerd.

#### 2.4.2 PRIVATISERING EN INVESTERINGEN

In paragraaf 2.1 zijn al enige manieren genoemd waarop privatisering investeringen in infrastructuur kan beïnvloeden. Over het algemeen mag worden geconcludeerd dat privatisering investeringen in infrastructuur bevordert, met name omdat opportunistisch gedrag van de overheid in de vorm van het veranderen van doelstellingen, of door de veelheid van doelstellingen van de overheid, wordt gereduceerd. Hierbij dienen dan wel de kanttekeningen te worden gemaakt dat kwaliteit en betrouwbaarheid van netwerkdiensten in voldoende mate via contracten moeten kunnen worden vastgelegd, en dat private en publieke doelstellingen in grote mate overeen moeten komen (uitgaande van het Hart, Shleifer en Vishny denkkader 1997. Wordt aan die twee randvoorwaarden namelijk niet voldaan, dan bestaat er een risico van onderinvestering. Concurrentie, een andere voorwaarde in dit denkkader, kan het risico van onderinvestering niet afdekken, omdat we hier uitgaan van een natuurlijk monopolie.

De vermogensstructuur van de netwerkonderneming op het moment van privatiseren is verder ook belangrijk voor investeringen. De financieringstheorie, zoals die in paragraaf 2.3 is uitgelegd, is met name geschikt om de vermogensstructuur van private ondernemingen te verklaren. Bij publieke ondernemingen kunnen allerlei andere overwegingen een rol spelen. Lokale overheden kunnen bijvoorbeeld een netwerkonderneming gebruiken om de behaalde winst te gebruiken om budgetten mee aan te vullen, in plaats van het financieren van investeringen. Op het moment van privatisering kunnen netwerkondernemingen zo worden opgescheept met de last van achtergebleven investeringen en is de druk om te investeren groter dan bij een onderneming zonder die historische last.

Het kan ook zijn dat er op het moment van privatisering een vermogensstructuur is die niet past bij die een private onderneming. In paragraaf 2.5.2 zullen voorbeelden uit het Verenigd Koninkrijk worden aangehaald waarbij er sprake was van een lage *gearing* op het moment van privatisering, maar waarbij de rol van vreemd vermogen steeds groter is geworden (hoge *gearing*), zelfs tot het niveau dat veel experts een risico van faillissementen reëel achten.

#### ***Gevaren van een hoge gearing***

Bucks (2003) wijst op een aantal gevaren van een hoge *gearing* bij netwerkbedrijven. Ten eerste veroorzaakt het een beperkte financiële flexibiliteit om te reageren op onvoorziene omstandigheden. Dit leidt tot een verhoogd risico op faillis-

sement, waarvan de afnemers of belastingbetalers waarschijnlijk uiteindelijk de rekening zullen betalen. Daarbij bemoeilijkt het de toegang tot de kapitaalmarkt. Ten tweede verhoogt het de financiële druk op ondernemingen (maandelijkse interestlasten zijn relatief hoog) en dit vermindert de bereidheid voor het doen van infrastructuurinvesteringen. Ten derde verzwakt het de prikkels voor innovatie en schrikt het het nemen van risico's af. Ten vierde verhoogt een hoge *gearing* het risico van *systemic failure* (het zogenaamde systeemrisico), dat wil zeggen dat door *knock-on*-effecten het faillissement van één onderneming bredere gevolgen heeft en kan leiden tot het falen van het gehele financiële systeem. Tenslotte is er minder druk van aandeelhouders om efficiënt te opereren.

### 2.4.3 LIBERALISERING, VERTICALE ONTVLECHTING EN INVESTERINGEN

Liberalisering beïnvloedt op een aantal manieren investeringen in infrastructuur. Een direct effect ontbreekt, omdat liberalisering geen concurrentie creëert op de natuurlijke monopolieonderdelen van netwerksectoren. Er is echter een aantal indirecte effecten.

Liberalisering kan ervoor zorgen dat investeringen moeilijker worden terugverdiend. Indien de infrastructuuronderneming verticaal geïntegreerd is en ook op geliberaliseerde onderdelen actief is, kan liberalisering door een toename van concurrentie de contributiemarges van een infrastructuuronderneming verkleinen. Dit beperkt de terugverdienmogelijkheden van investeringen, en daarmee ook op de prikkel tot investeren.

Verder is het zo dat regulering van netwerkonderdelen vaak een administratieve scheiding (*accounting separation*) van netwerk- en potentieel competitieve onderdelen vereist. De reden is dat de gereguleerde onderneming een prikkel heeft om veel kosten op te geven als netwerkkosten, zodat de maximale tarieven hoger worden. Door een administratieve scheiding is hier door een toezichhouder beter controle op te houden.

In bepaalde gevallen wordt onder regulering ook daadwerkelijke scheiding ('verticale ontvlechting') opgelegd, zoals in het geval van het hoogspanningsnet in Nederland – zie paragraaf 2.5.3). Vanuit een economisch oogpunt zijn hier voor- en nadelen aan verbonden. Nadeel is dat efficiëntievoordelen die anders door verticale integratie zouden worden verkregen (denk aan het oplossen van technische coördinatieproblemen of het voorkomen van margevervetting (*double marginalisation*), niet langer optreden. Omdat dit de winst beperkt, beïnvloedt het de financieringsmogelijkheden voor investeringen in infrastructuur op een negatieve manier. Voordeel van verticale ontvlechting is dat waar een verticaal geïntegreerd netwerkbedrijf mogelijk een prikkel heeft om stroomafwaartse rivalen buiten te sluiten (bijvoorbeeld via hoge netwerktarieven), deze prikkel volledig verdwijnt. Regulering van netwerktarieven is vaak nog wel nodig, maar is dan volledig gericht op het aanpakken van excessief hoge tarieven en niet langer op uitsluiting (Van Dijk 1998).

Ten slotte ontstaat reguleringonzekerheid niet alleen door sectorspecifieke toezichthouders, maar ook door mededingingsautoriteiten die algemene mededingingsregels *ex post* handhaven. In latere fasen van liberalisering is te verwachten dat sectorspecifiek toezicht wordt vervangen door generiek mededingingstoezicht. Met name door de hoge verzonken en de vaak sterk asymmetrische marktstructuur (één grote speler – de voormalige monopolist – en een aantal kleine toetreders), doen zich in netwerksectoren relatief veel zaken voor van (vermeend) misbruik van economische machtsposities. Onzekerheid over behandeling van deze zaken en de toegestane bewegingsvrijheid van voormalige netwerkmonopolisten draagt ook bij aan investeringsrisico's.

#### 2.4.4 TARIEFREGULERING EN INVESTERINGSPRIKKELS

Zoals beschreven in paragraaf 2.2.3 is tariefregulering in te delen in twee hoofd-categorieën: *low-powered* regulering als rendement of *cost-plus* tariefregulering en *high-powered* regulering als meerjarige tariefplafonds. *Low-powered* regulering geeft aan de ene kant weinig prikkels aan een bedrijf om zo kostenefficiënt mogelijk te werken, maar laat aan de andere kant weinig excessieve winsten aan onderneming en beperkt zo statische welvaartsverliezen (*deadweight losses*). *High-powered* regulering daarentegen prikkelt de onderneming om kostenefficiënt te opereren, omdat kostenbesparingen aan de gereguleerde onderneming zelf toekomen (die is *residual claimant*). Deze categorie tariefregulering pakt echter het probleem van excessieve prijzen op de korte termijn minder hard aan en veroorzaakt daarom op korte termijn meer welvaartsverliezen. In essentie kiezen beide categorieën regulering dus een andere oplossing in de afruil tussen statische efficiëntie (het minimaliseren van *deadweight losses*) en productieve efficiëntie (inspanningen om kosten te reduceren aanmoedigen).

Als het om langetermijninvesteringen in infrastructuur gaat, dan is het waarschijnlijk dat *low-powered* regulering leidt tot *overinvesteringen*. Zoals eerder gesteld is een jaarlijkse rendementsregulering waarbij de tarieven die de gereguleerde onderneming mag aanrekenen door de toezichthouder worden vastgesteld op basis van kosten en een redelijk rendement op vermogen, een voorbeeld van *low-powered* toezicht. Zolang de kosten van investeringen in infrastructuur worden geaccepteerd door de toezichthouder als onderdeel van de relevante kosten waarop tarieven worden gebaseerd (de zogenaamde *regulatory rate base*), heeft de gereguleerde onderneming volop prikkels om deze investeringen te plegen. Sterker nog, de onderneming heeft geen prikkel om terughoudend te zijn en niet meer te investeren dan sociaal wenselijk (ook wel *gold-plating* genoemd). De gereguleerde onderneming loopt in deze situatie namelijk geen enkel investeringsrisico, en wentelt alle risico's en kosten feitelijk af op eindgebruikers die de netwerkdiensten afnemen voor tarieven waar deze kosten in verwerkt zijn. Het klassieke artikel dat dit punt naar voren brengt is Averch en Johnson (1962).

Daarnaast zijn er onder dit type regulering weinig prikkels voor gereguleerde ondernemingen om kostenbesparingen te bewerkstelligen. Bij rendementsregulering leiden lagere kosten tot lagere tarieven, omdat ze worden ‘afgeroomd’ door de toezichthouder middels lagere tarieven; ze leiden niet tot meer winst van de gereguleerde onderneming. Dit punt werd eerst naar voren gebracht in Baumol en Kleverick (1970). Dit leidt ertoe dat onder rendementsregulering investeringen in procesinnovaties, dat zijn innovaties die tot lagere kosten leiden, of in het algemeen inspanningen om efficiënter te produceren, minder waarschijnlijk zijn.

Onder *high-powered* prijstoezicht, zoals meerjarige tariefplafonds of *incentive*-regulering meer algemeen, zijn de prikkels om kosten te besparen voor een gereguleerde onderneming sterk. Ze kunnen zelfs zo sterk zijn dat kostenbesparingen excessief zijn, en bijvoorbeeld tot volumedalingen of kwaliteitsverlies leiden. Dit verschijnsel is ook wel *asset sweating* genoemd.

Verder geeft *high-powered* toezicht minder prikkels om te investeren in infrastructuur, hetgeen leidt tot een risico van *onderinvesteringen* in infrastructuur, tenzij er speciale voorwaarden gelden voor het aanpassen van de plafonds tijdens de reguleringsperiode om te voorzien in de investeringskosten. Een andere uitzondering hierop is als er expliciete kwaliteitsregulering is waar de gereguleerde onderneming zich aan dient te houden. In dat geval zijn investeringen in infrastructuur zuiver ingegeven om aan de minimum kwaliteitseisen van de toezichthouder te blijven voldoen. In vergelijking met rendementsregulering legt *incentive*-regulering de risico's van investeringen bij de gereguleerde onderneming zelf en zijn aandeelhouders (Guthrie 2006).

**Tabel 2.4** Effecten rendementsregulering en ‘incentive’ regulering

	Inspanningen om kosten te reduceren	Investeringsbereidheid
Rendementsregulering	-	+ (risico van overinvesteringen)
‘Incentive’ regulering	+	- (risico van onderinvesteringen)

‘+’ geeft een positief effect aan; ‘-’ geeft een negatief effect aan

Deze voorspellingen van de theoretische literatuur van overinvestering onder rendementsregulering en onderinvestering onder *incentive*-regulering wordt ook bevestigd in een aantal empirische onderzoeken (er bestaat geen uitgebreide empirische literatuur). Greenstein, McMaster en Spiller (1995) vinden dat in de Verenigde Staten telecommunicatiebedrijven (Local Exchange Carriers ofwel LEC's) meer investeren in moderne infrastructuurapparatuur als ze onder een regime van tariefplafonds staan dan als ze onderworpen zijn aan rendements-

regulering. In een latere studie vinden Chang, Koski en Majumdar (2003) dat in de Verenigde Staten lagere tarieven voor netwerkdiensten (meestal gepaard gaande met rendementsregulering), investeringen in nieuwe technologieën in de telecommunicatiesector lijken te hebben gestimuleerd; voor Europa lijkt deze conclusie volgens hen echter niet op te gaan en lijken hogere netwerktarieven samen te gaan met hogere investeringen in infrastructuur.

#### **2.4.5 REGULERING EN TIMING VAN INVESTERINGEN**

In het algemeen kan gesteld worden dat bij onzekerheid over de omvang van toekomstige vraagvolumes, een monopolist te lang wacht met investeren, vergeleken met de sociaal gezien optimale timing. De reden is de volgende ‘externaliteit’: de monopolist draagt alle investeringsuitgaven, maar ontvangt slechts het producentensurplus, en niet ook het consumentensurplus. Een sociale planner zou de investeringsuitgaven afzetten tegen de som van producenten- en consumentensurplus. Door langer te wachten met te investeren of met uit te breiden van capaciteit kan een monopolist in de loop van de tijd hogere prijzen hanteren dan zouden optreden in een competitieve markt. Op die manier kan de monopolist het producentensurplus vergroten – hij houdt er geen rekening mee dat het ten koste gaat van het consumentensurplus.

Dobbs (2004) stelt vast dat verschillende reguleringsregimes de timing van investeringen verschillend beïnvloeden. Bij rendementsregulering kan de sociale planner de externaliteit corrigeren door de hoogte van de vastgestelde tarieven te veranderen, te weten door een opslag op de prijs om de investeringsuitgaven terug te verdienen. Hierdoor is er feitelijk geen onzekerheid meer voor de gereguleerde monopolist.

Bij meerjarige tariefplafonds, zo vindt Dobbs (2004), kan de externaliteit slechts volledig gecorrigeerd worden bij zekerheid omtrent de hoogte van de toekomstige vraag. Bij onzekerheid over de vraag, echter, zal bij een prijsplafond het probleem blijven bestaan dat monopolist te lang wacht met investeren. De reden hiervoor is dat in de omstandigheid van een lage vraag prijzen laag zijn en het tariefplafond niet bindend is. Bij een toename van de vraag zal een monopolist dan niet direct investeren in capaciteitsuitbreiding. Het is beter voor hem om de vraag aanvankelijk te rantsouneren en te wachten met investeren totdat de vraag sterk is toegenomen. Dit reduceert het risico als gevolg van latere vraagschokken en zorgt ervoor dat de prijs in de loop van de tijd hoger kan zijn.

#### **2.4.6 INTERACTIE GEREGULEERDE ONDERNEMING, VERMOGENSSTRUCTUUR EN TOEZICHTHOUDER**

Een deel van de economische reguleringsliteratuur gaat specifiek in op de relatie tussen toezichthouders en gereguleerde ondernemingen, en met name op de rol die de vermogensstructuur van een gereguleerde onderneming daarbij speelt.

### **Hoge gearing als wapen tegen ‘regulatory opportunism’**

Dasgupta en Nanda (1993) gebruiken een onderhandelingsmodel van regulering, waarin gereguleerde ondernemingen met een toezichthouder onderhandelen over tarieven. Gereguleerde ondernemingen kunnen hun onderhandelingsmacht verbeteren en hogere prijzen afdingen bij de toezichthouder door meer vreemd vermogen te kiezen. Als de gereguleerde onderneming het aandeel van vreemd vermogen kiest, dan weegt hij deze verbeterde onderhandelingspositie af tegen een toegenomen kans op faillissement. Het onderhandelingsmodel voorspelt dat bedrijven hogere aandelen vreemd vermogen kiezen indien regulering ‘strikter’ is. Dasgupta en Nanda testen deze voorspelling aan de hand van regulering van elektrische nutsbedrijven in de Verenigde Staten in de periode 1972-1983 en vinden gedrag dat consistent is met hun voorspelling.

In een artikel dat een gelijkaardig probleem bestudeert leggen Spiegel en Spulber (1994) een verband tussen het *regulatory commitment* probleem, dat in paragraaf 2.2.4 werd besproken, en de vermogensstructuur van een gereguleerde onderneming. Hun belangrijkste bevinding is dat vanwege het commitment-probleem van een toezichthouder om zich niet opportunistisch te gedragen bij het vaststellen van tarieven, de gereguleerde onderneming een prikkel heeft om meer via vreemd vermogen te financieren (met andere woorden, een hoge *gearing* te kiezen). De reden is dat de onderneming zo het risico inperkt dat de toezichthouder zich opportunistisch zal gedragen. Een toezichthouder zal namelijk op een hoger aandeel vreemd vermogen reageren met het verhogen van toegestane tarieven, omdat dat de kans doet afnemen dat de gereguleerde onderneming failliet gaat. Een hoger aandeel vreemd vermogen reduceert daarmee de prikkel van een toezichthouder om tarieven te verlagen in reactie op investeringen van de gereguleerde onderneming in kostenreductie.

Het toestaan van schuldfinanciering is een middel voor een toezichthouder om zichzelf impliciet te committeren om niet opportunistisch te reageren (het toestaan van schuldfinanciering is daarmee een zogenaamd *commitment device* voor de toezichthouder). Ondanks dit middel is de uitkomst van het theoretische model van Spiegel en Spulber toch nog dat de gereguleerde onderneming minder investeert dan sociaal wenselijk – dit blijft het resultaat van een, nu weliswaar deels opgelost, gebrek aan *regulatory commitment*.

### **Vermogensstructuur als ‘signalling’-instrument naar toezichthouder en kapitaalmarkt**

In een latere studie voegen Spiegel en Spulber (1997) bij het bovenbeschreven effect van schuldfinanciering op gereguleerde prijzen nog het volgende effect toe. Er bestaat informatieasymmetrie tussen de toezichthouder, investeerders en de gereguleerde onderneming zelf over de werkelijke kosten van een gereguleerde onderneming. De informatieasymmetrie zorgt ervoor dat de onderneming aan de ene kant lage kosten en hoge winstgevendheid wil signaleren aan de kapitaalmarkt. Aan de andere kant echter wil diezelfde onderneming juist aan de toezichthouder signaleren dat de kosten hoog zijn. Tariefregulering vindt immers

plaats op basis van kosten en hoge kosten impliceren dan hoge maximale tarieven.

Spiegel en Spulber (1997) analyseren het geval waarbij een toezichthouder een gereguleerde onderneming toelaat nieuwe financieringsmiddelen te betrekken voor nieuwe investeringen in infrastructuur. De vermogensstructuur die de onderneming zal kiezen voor de nieuwe investering hangt in hun model af van de grootte van de investering. Voor relatief grote investeringen overheerst het effect dat de onderneming zich in de eerste plaats wil wapenen tegen opportunistisch gedrag van de toezichthouder, en dus relatief veel vreemd vermogen zal aantrekken. Bij kleinere investeringen zijn de consequenties van opportunistisch gedrag geringer en overheerst het effect dat een onderneming aan de kapitaalmarkt wil signaleren lage kosten te hebben.

### ***Investerings in gereguleerde hightechsectoren***

Biglaiser en Riordan (2000) bestuderen de effecten van regulering op investeringen in sectoren die gekenmerkt worden door een hoge mate van technologische ontwikkeling, denk met name aan de telecommunicatiesector. Idealiter zou een onderneming rekening moeten houden met technologische ontwikkeling door activa sneller af te schrijven, omdat door die technologische ontwikkeling zowel kapitaalkosten als operatingkosten van nieuwe activa afnemen.

Wat Biglaiser en Riordan 'naïeve' rendementsregulering noemen gaat uit van historische investeringen en neemt bij het vaststellen van tarieven alleen afschrijvingskosten van deze historische investeringen mee. Omdat niet wordt uitgegaan van economische afschrijvingen, die wel rekening houden met de technologische ontwikkeling, leidt dit aanvankelijk tot te lage tarieven. In de loop van de tijd echter leidt dit onherroepelijk tot te hoge tarieven, omdat de gereguleerde onderneming is achtergebleven met werkelijke economische afschrijvingen, en dit gecorrigeerd dient te worden. Een systeem van meerjarige tariefplafonds leidt volgens Biglaiser en Riordan (2000) tot betere beslissingen met betrekking tot vervanging van activa dan rendementsregulering, omdat de gereguleerde onderneming meer vrijheid heeft om een economisch afschrijvingsbeleid te bepalen.

#### **2.4.7 CONCLUSIE**

De relaties tussen privatisering, liberalisering en regulering enerzijds en investeringen in infrastructuur anderzijds zijn complex. De economische theorie heeft veel bijgedragen tot een beter begrip van deze relaties, maar er is duidelijk (nog) geen algemene, veelomvattende theorie.

Twee thema's in het bijzonder komen in de huidige regulerings- en financieringstheorie als belangrijk naar voren: asymmetrische informatie en contractuele problemen. Asymmetrische informatie treedt in een aantal gevallen op: tussen toezichthouders en gereguleerde ondernemingen, maar ook tussen vermogensverschaffers en vermogensvragers, of tussen eigenaars en bestuurders. Asymme-

trische informatie leidt tot het maken van keuzes bij toezicht (bijvoorbeeld tussen rendementsregulering of *incentive*-regulering) en veroorzaakt sociale kosten.

Contractuele imperfecties (de onmogelijkheid om complete contracten te schrijven) leidt tot een risico van opportunistisch gedrag aan de kant van de toezichthouder, maar ook aan de kant van de overheid als eigenaar van een netwerkbedrijf in geval van nationalisering. De sleutel tot het verzachten van contractuele imperfectie problemen is *commitment* van de overheid om bepaald gedrag niet te gaan vertonen. Het vinden van geloofwaardige manieren van *commitment* is een grote uitdaging voor reguleringsbeleid.

## 2.5 TWEE INFRASTRUCTUREN IN NEDERLAND NADER BEKEKEN

### 2.5.1 INLEIDING

Na het weergeven van de kernpunten uit de economische literatuur over regulering, financiering en de effecten op investeringen in infrastructuur, wordt in dit hoofdstuk een tweetal belangrijke infrastructuren in Nederland nader bekeken.

#### ***Tennets hoogspanningsnet***

Dat is ten eerste het elektriciteitstransportnet van Tennet. Dit bestaat uit de 220 en 380 kv hoogspanningsnetten in Nederland, waarover elektriciteit van producenten naar distributeurs (en uiteindelijk eindgebruikers) wordt getransporteerd. Het hoogspanningsnet van Tennet is (weer) volledig in publieke handen en heeft sterke natuurlijke monopoliekenmerken waardoor concurrentie niet mogelijk of wenselijk is. Liberalisering van dit onderdeel van de elektriciteitssector is dus ook niet aan de orde. Verder zijn technologische ontwikkelingen en innovaties relatief beperkt voor hoogspanningsnetten. Investeringsprojecten hebben doorgaans betrekking op onderhoud. Uitzonderlijke investeringsprojecten hebben betrekking op uitbreiding van de infrastructuur vanwege een toegenomen vraag naar elektriciteit of op verhoging van de capaciteit van koppelingen met buitenlandse netwerken.

#### ***KPN's vaste net voor telecommunicatiediensten***

De tweede infrastructuur die wordt bekeken is het vaste net van KPN, waartoe het aansluitnet (het laatste gedeelte tot in huizen of kantoren) en het kernnet (het geheel van regionale centrales) behoren. Over dit vaste net worden diensten als vaste telefonie, breedband internettoegang en IP (Internet Protocol) televisie geleverd. De voornaamste reden om juist deze twee infrastructuren te bestuderen is dat ze in bepaalde, voor deze studie belangrijke, opzichten aanzienlijk verschillen. Het KPN-netwerk is in private handen (het overheidsaandeel is momenteel geheel verdwenen) en ondervindt na liberalisering niet alleen concurrentie in dienstverlening, maar in toenemende mate ook van andere netwerken (waaronder de kabelnetwerken). Bovendien bevindt het zich in de hoogtechnologische en dynamische telecommunicatiesector, waar niet alleen investeringen in

onderhoud, maar vooral ook investeringen in nieuwe diensten en nieuwe transmissietechnologieën belangrijk zijn. De regulering van KPN's netwerktarieven sinds 1998 door OPTA heeft verschillende varianten gekend.

### **Organisatie**

Alvorens de relatie tussen regulering en investeringen voor deze twee Nederlandse infrastructures te bestuderen, worden in paragraaf 2.5.2 de ervaringen in het Verenigd Koninkrijk met liberalisering en privatisering van diverse infrastructures, en de impact daarvan op investeringen, weergegeven. Het Verenigd Koninkrijk heeft historisch gezien vooropgelopen bij liberalisering en privatisering van netwerksectoren en van ervaringen daar kunnen lessen voor Nederland worden getrokken. Vervolgens worden in paragraaf 2.5.3 de hoogspanningsnetten van Tennet bestudeerd en in paragraaf 2.5.4 het vaste net van KPN. Het doel hierbij is om op basis van ervaringen en ontwikkelingen bij deze twee infrastructures, verbanden in de praktijk na te gaan tussen marktwerkinginitiatieven (privatisering en liberalisering), regulering van netwerktarieven, financieringsstructures en investeringen.

## **2.5.2 ACHTERGROND: ERVARINGEN IN HET VERENIGD KONINKRIJK**

Sinds 2000 is er een toenemend aantal publicaties in het Verenigd Koninkrijk die erop wijzen dat de vorm van prijsregulering die is gekozen in een aantal netwerksectoren het risico in zich heeft dat er te weinig investeringen worden gepleegd in infrastructuur.

### **Onderinvesteringen**

In het rapport *Economic Regulators* van de Better Regulation Taskforce van juli 2001 wordt al gesteld dat "... since privatisation the emphasis has tended to be on cutting prices to customers and not on investment ...". De Taskforce doet deze uitspraak op basis van consultatie van en interviews met toezichthouders en gereguleerde en niet-gereguleerde ondernemingen. Een van de factoren die wordt genoemd ter verklaring is het systeem van meerjarige tariefplafonds dat wordt gebruikt om netwerksectoren te reguleren. Hoewel investeringen onder meerjarige tariefplafonds ook tot stand kunnen komen, zorgt de sterke prikkel om kosten te besparen ervoor dat bepaalde investeringen achterblijven.

Een recent consultatiedocument van de toezichthouders in de water en energie sector (OFWAT en OFGEM, respectievelijk) over de financiering van netwerken bevestigt dat het probleem nog steeds hoog op de agenda staat in het Verenigd Koninkrijk.

### **Hoge gearing van geprivatiseerde netwerkoncerningen**

De hoge *gearing*-ratio's (relatief veel vreemd vermogen) bij ondernemingen in, onder andere, de water- en elektriciteitsdistributie dragen ook bij aan het achterblijven van investeringen. Bucks (2003) wijst erop dat in de elektriciteitsdistributiesector in het Verenigd Koninkrijk ondernemingen een hoge *gearing*-ratio

hebben. Dit was al bekend voor ondernemingen in de watersector, waar er in hoge mate *leveraged refinancing* (meer vreemd vermogen en minder eigen vermogen) heeft plaatsgevonden sinds de privatisering van waterbedrijven. Bucks maakt de grove inschatting dat in maart 2003 vreemd vermogen (schuldfinanciering) bij de geprivatiseerde waterbedrijven was opgelopen tot 83% van de totale waarde van de gereguleerd activa (de *regulatory asset value*). Het gemiddelde in de sector, waaronder ook de niet-geprivatiseerde waterbedrijven, was ongeveer 57%. Op het moment van privatisering lag dit gemiddelde op ongeveer 25%. Bucks stelt verder vast dat de *gearing*-ratio's in elektriciteitsdistributie gemiddeld nog hoger liggen, te weten 82% van de waarde van gereguleerde activa.

Oxera (2005) bevestigt het bestaan van hoge gearing ratio's in de water-, elektriciteitsdistributie en ook in de spoorsector (spoorwegennetwerk). Er wordt wederom op gewezen dat hoge schuldfinanciering negatieve langetermijnimplicaties heeft voor het systeemrisico dat het gehele financiële systeem instort. Verder leidt een hoge schuldfinanciering ertoe dat ondernemingen geneigd zijn risico te mijden bij investeringen, en bijvoorbeeld eerder kiezen voor vervangingsinvesteringen in plaats van investeringen in verbeterde of vraagverhogende diensten. Oxera wijst erop dat vereiste investeringen in netwerksectoren hoog zijn en wellicht nog hoger worden. Dit wordt veroorzaakt door toename van de vereiste capaciteit, vervanging van bestaande activa, hogere milieu-eisen, en een verleden van *asset sweating* (dat wil zeggen het tot het uiterste gebruiken van activa om kostenbesparingen te bewerkstelligen, investeringen niet te doen of uit te stellen, om zo hogere winsten te behalen). In paragraaf 2.4.2 werden de risico's van een hoge gearing in netwerksectoren reeds genoemd.

### **Gesuggereerde oplossingen**

In een latere publicatie suggereert Oxera (2006) twee mogelijke oplossingen om gereguleerde ondernemingen aan te sporen om investeringen te plegen in infrastructuur. Dat is in de eerste plaats het beperken van het risico dat wordt gedragen door de onderneming tijdens de reguleringsperiode – denk bijvoorbeeld aan de mogelijkheid om bepaalde kosten van nieuwe investeringen door te rekenen in tarieven. In de tweede plaats kunnen de potentiële opbrengsten van investeringen in infrastructuur worden verhoogd – denk bijvoorbeeld aan het belonen van elementen in infrastructuurprojecten die hoge risico's vormen (opbrengstenpremies voor specifieke risico's).

## **2.5.3 HOOGSPANNINGSNETTEN VAN TENNET**

In deze paragraaf wordt een inschatting gemaakt van de investeringen in de hoogspanningsinfrastructuur door Tennet in Nederland. Deze inschatting is noodzakelijk kwalitatief en tot op zekere hoogte speculatief, omdat gedetailleerde informatie die noodzakelijk is voor een betere inschatting ontbreekt. Hieronder zal in het eerste deel het proces van liberalisering, aanvankelijke plannen voor privatisering (Tennet is nu 100% publiek) en de regulering van Tennet worden geschetst. In het tweede deel wordt de investeringspositie van Tennet

ingeschat, aan de hand van financiële kerncijfers, kwaliteitsindicatoren en bijzondere investeringsprojecten. Tenslotte zullen enkele conclusies op een rij worden gezet.

### **Liberalisering, aanvankelijk geplande privatisering en regulering**

De kernpunten met betrekking tot marktwerkinginitiatieven en het elektriciteits-hoogspanningsnet zijn als volgt.

- Het hoogspanningsnet is een natuurlijk monopolie; concurrentie op infrastructuurniveau is niet mogelijk of niet wenselijk.
- Bij liberalisering van de elektriciteitsmarkt in Nederland is vastgelegd dat Tennet niet op andere niveaus in de bedrijfskolom actief mag zijn; Tennet mag geen producent, distributeur en/of handelaar in elektriciteit zijn.
- Tennet is niet geprivatiseerd; vóór 1998 was het hoogspanningsnet in handen van lokale overheden en sinds oktober 2001 van de centrale overheid.
- Tennets transporttarieven worden door de Directie Toezicht energie (DTE) gereguleerd via meerjarige tariefplafonds (*incentive*-regulering).
- Naast tariefregulering is Tennet ook onderworpen aan kwaliteits- en investeringsregulering.

Deze punten zullen hieronder nader worden toegelicht.

### **Liberalisering: Elektriciteitswet 1998**

Op 1 augustus 1998 trad de Elektriciteitswet 1998 in werking. Deze wet was ontworpen ter uitvoering van de Europese liberaliseringrichtlijn (richtlijn nr. 96/92/EG). De Elektriciteitswet 1998 vormt het raamwerk voor liberalisering van de elektriciteitssector in Nederland.

In de Elektriciteitswet werden de volgende bepalingen opgenomen. Ten eerste werd concurrentie tussen leveranciers onderling, en met handelaren, geïntroduceerd middels het geleidelijk invoeren van keuzevrijheid voor afnemers, te beginnen bij de 650 grootste afnemers tot en met huishoudens op uiterlijk juli 2004. Ten tweede werd bepaald dat netwerkdiensten en netwerk tarieven moeten worden ontbundeld, dat wil zeggen dat ze apart en los van andere onderdelen van het eindtarief moeten worden aangeboden en bepaald. Ten derde werd een sectorspecifieke toezichthouder, Dienst Toezicht energie (DTE – nu als Directie Toezicht energie onderdeel van de Nederlandse Mededingingsautoriteit (NMA)) opgericht, met als doel toe te zien op de concurrentie en om netwerk tarieven van onder andere het hoogspanningsnet te reguleren. Tenslotte werd een onafhankelijke landelijke netwerkbeheerder gecreëerd die geen producent, leverancier en/of handelaar mocht zijn. Dit werd Tennet. Hiermee kwam een einde aan het beheer door het hoogspanningsnet door SEP, de Samenwerkende Elektriciteits [zie tabel 5] Producenten.

### **Eigendomsverhoudingen: van lokale overheden naar centrale overheid**

In tabel 5 worden de belangrijkste data met betrekking tot het hoogspanningsnet op een rij gezet.

**Tabel 2.5 Belangrijke data voor eigendomsverhoudingen hoogspanningsnet Nederland**

Vóór 1 augustus 1998	Hoogspanningsnetten eigendom en in beheer van Samenwerkende Elektriciteits Producenten (SEP), opgericht in 1949. Elektriciteitsproducenten waren direct of indirect in handen van gemeenten en provincies.
1 augustus 1998	Bij inwerkingtreden van de Elektriciteitswet 1998 wordt Tennet opgericht als onafhankelijk landelijk netbeheerder. Tennet heeft geen banden met productie en levering. Tennet is een dochteronderneming van SEP, waarin de overheid een meerderheid heeft van 50% plus 1 aandeel. De overheid krijgt dit meerderheidsaandeel in ruil voor haar bijdrage aan de niet-marktconforme kosten ('bakstenen') van de elektriciteitsproducenten.
1 januari 2001	SEP wordt ontbonden en gaat over in BV Nederlands Elektriciteit Administratiekantoor (NEA). NEA moet nog lopende activiteiten en verplichtingen van SEP afbouwen.
25 oktober 2001	Nederlandse staat verwerft alle aandelen in Tennet BV van NEA. Bedoeling was om Tennet op korte termijn te privatiseren.
November 2002	Tweede Kamer besluit om Tennet in overheidshanden te houden
Maart 2005	In het wetsvoorstel splitsing energiebedrijven wordt voorzien dat Tennet het beheer van de regionale netten (110 en 150 kv) krijgt. Deze regionale netten worden afgesplitst van de verticaal geïntegreerde energiebedrijven, die activiteiten op het gebied van levering, handel en productie blijven uitvoeren. Dit wetsvoorstel is inmiddels door de Tweede en Eerste Kamer aangenomen.

Bron: <http://www.minez.nl>; [www.energie.nl](http://www.energie.nl)

Het hoogspanningsnet is dus niet geprivatiseerd. Dit was aanvankelijk wel de bedoeling, maar is uiteindelijk niet doorgegaan. In de loop van de jaren is het eigendom van het hoogspanningsnet in verschillende overheidshanden geweest (zie Tabel 6 hieronder). Aanvankelijk was het in handen van lokale overheden en vanaf oktober 2001 is het voor 100% in handen van de centrale overheid, de Nederlandse staat.

**Tabel 2.6 Drie fasen in eigendom hoogspanningsnet**

Periode	Eigenaar
Vanaf 10/2001	100%: Nederlandse staat
Tussen 8/1998 en 10/2001	50% + 1: Nederlandse staat 50% - 1: Electrabel Nederland; E.On Benelux; Reliant; Essent, Delta (op 10/2001)
Vóór 1998	100%: lokale overheden (gemeenten en provincies)

Bron: <http://www.minez.nl>; [www.energie.nl](http://www.energie.nl)

### Regulering van Tennet

Tennet is aan verschillende soorten regulering onderhevig: tariefregulering (van de transporttarieven op het hoogspanningsnet), kwaliteitsregulering en investeringsregulering.

### Tariefregulering

Tariefregulering is geregeld in Artikel 27, lid 3 van de Elektriciteitswet 1998 waar wordt gesteld: *“De tarieven die de netbeheerder van het landelijk hoogspanningsnet in rekening brengt voor de handhaving van de energiebalans zijn objectief, transparant, niet-discriminatoir en weerspiegelen de kosten.”* DTe reguleert de transporttarieven via meerjarige tariefplafonds. Tarieven mogen jaarlijks niet meer stijgen dan de consumentenprijsindex (CPI) minus een bepaald percentage (de zogenaamde x-factor, ook wel ‘efficiëntiekorting’ genoemd). Zoals weergegeven in Tabel 7 is over de laatste drie reguleringsperioden de x-factor vastgesteld op 3.0%, 7.2% en 1.4% (de huidige x-factor). Het huidige regime met 1.4% is duidelijk minder strikt dan het voorgaande regime van 7.2%. Hoewel tariefplafonds volgens de economische theorie gericht zijn op het geven van prikkels voor kostenreducties, en de hoogte van de x-factor de sterkte van deze prikkels niet beïnvloedt, is het in de praktijk vaak zo dat tariefplafonds gericht zijn op het forceren van kostenverlagingen door een hoge x-factor te bepalen. Vanuit dat perspectief is een x-factor van 1.4% minder streng dan een x-factor van 7.2%.

**Tabel 2.7** Reguleringsperioden Tennet’s transporttarieven

Periode	Netwerkstarieven
Derde reguleringsperiode (1/1/2007 – 31/12/2010)	Prijsplafond: CPI – 1.4%
Tweede reguleringsperiode (1/1/2004 – 31/12/2006)	Prijsplafond: CPI – 7.2%
Eerste reguleringsperiode (1/1/2001 – 31/12/2003)	Prijsplafond: CPI – 3.0%
Van 8/1998 tot 31/12/2000	Rendementsregulering
Vóór 8/1998	Jaarlijkse vaststelling tarieven op basis van kosten (rendementsregulering)

Bron: DTe; x-factor besluit Tennet ([http://www.dte.nl/images/12\\_14086\\_tcm7-3901.pdf](http://www.dte.nl/images/12_14086_tcm7-3901.pdf)); x-factor besluit 2001-2003 ([http://www.dte.nl/images/12\\_6176\\_tcm7-5247.pdf](http://www.dte.nl/images/12_6176_tcm7-5247.pdf))

### Kwaliteits- en investeringsregulering

In tegenstelling tot de regionale netbeheerders geldt er voor Tennet als beheerder van het landelijk hoogspanningsnet geen kwaliteitsterm in de prijsplafonds. Bij regionale netbeheerders geldt sinds 2004 de volgende tariefplafond formule:  $CPI - x + q$ , waarbij  $q$  de kwaliteitsterm is die de aanpassing van de tarieven in

verband met de geleverde kwaliteit aangeeft. Een dergelijke kwaliteitsterm geldt voor Tennet dus niet (zie Artikel 41a - 41e, Elektriciteitswet 1998).

In algemene zin ligt regulering van kwaliteit van Tennets diensten en Tennets investeringen besloten in de taken die de Elektriciteitswet 1998 definieert voor netbeheerders in het algemeen (inclusief regionale netbeheerders) en Tennet in het bijzonder. Meer precies zijn de volgende bepalingen belangrijk voor investeringen (Artikel 16, lid 1, sub a - c, Elektriciteitswet 1998).

*“De netbeheerder heeft in het kader van het beheer van de netten in het voor hem krachtens artikel 36 vastgestelde gebied tot taak:*

- a. *de door hem beheerde netten in werking te hebben en te onderhouden;*
- b. *de veiligheid en betrouwbaarheid van de netten en van het transport van elektriciteit over de netten op de meest doelmatige wijze te waarborgen;*
- c. *de netten aan te leggen, te herstellen, te vernieuwen of uit te breiden, waarbij in overweging worden genomen maatregelen op het gebied van duurzame elektriciteit, energiebesparing en vraagsturing of decentrale elektriciteitsproductie waardoor de noodzaak van vervanging of vergroting van de productiecapaciteit ondervangen kan worden; ...”*

In Artikel 16, lid 2, sub d, wordt daar voor de landelijke beheerder van het hoogspanningsnet nog onder andere de taak aan toegevoegd om: “... *voorzieningen te treffen in verband met de leveringszekerheid* ...”.

### **Investeringspositie van Tennet**

In dit deel wordt de investeringspositie van Tennet beoordeeld aan de hand van financiële indicatoren en kwaliteitsindicatoren en aan de hand van een aantal recente grote investeringsprojecten.

### **Financiële indicatoren**

Tabel 2.8 geeft een overzicht voor de periode 1999-2005 van enkele belangrijke financiële gegevens van Tennet: (1) omzet; (2) solvabiliteit; (3) rentabiliteit en (4) rentedekking.

- De *omzet* van Tennet (rij 1 in de tabel) is in de loop van de jaren aanzienlijk gestegen. Dit is ten dele te verklaren uit extra activiteiten van Tennet. Eind 2003, bijvoorbeeld, nam Tennet regionaal netbeheerder B.V. Transportnet Zuid-Holland over (met 542 km 150 kV-net en 180 km 380 kV-net verbindingen en 21 schakelstations in Zuid-Holland). Dit verklaart in elk geval ten dele de forse omzet toename tussen 2003 en 2004. Voor de rest wordt de omzettoename verklaard uit de toegenomen vraag en hogere (nominale) tarieven.
- De *solvabiliteit* is weergegeven in rij 2. Met solvabiliteit wordt aangegeven in hoeverre een onderneming de financiële verplichtingen aan verschafters van vreemd vermogen kan nakomen met behulp van alle activa. De solvabiliteit

van Tennet is in de loop van de tijd aanzienlijk toegenomen. In 1999 ten tijde van de oprichting van Tennet was de solvabiliteit met 17.1% slecht te noemen, en in 2005 was die aanzienlijk verbeterd tot 51.6%. Een mogelijke verklaring voor de lage solvabiliteit bij de oprichting van Tennet uit SEP is dat de gemeenten en provincies die toen reeds lange tijd direct of indirect eigenaar van het hoogspanningsnet waren, relatief veel eigen vermogen (bijvoorbeeld jaarlijkse winsten) uit de energiebedrijven hebben genomen.<sup>6</sup> Later, toen de energiebedrijven deels in private handen kwamen, werd een aanzet gemaakt met het verbeteren van de solvabiliteitspositie. Weer later, eind 2001, kwam Tennet voor 100% in handen van de centrale overheid en is de solvabiliteitspositie verder verbeterd (aanvankelijk mogelijk ook met het oog op latere privatisering, maar dat bleek politiek niet haalbaar).

- De *rentabiliteit* is weergegeven in rij 3. Met rentabiliteit wordt de verhouding weergegeven tussen de winst en het vermogen dat die winst heeft gegenereerd. Voor de langetermijncontinuïteit van een onderneming dient op lange termijn de winst voldoende groot te zijn om vermogensverschaffers gewenste uitkeringen in de vorm van dividend of interest te kunnen doen. Het is moeilijk om het absolute niveau van de rentabiliteit van Tennet in te schatten (dat zou een inschatting vereisen van het normrendement van Tennet, ofwel het Weighted Average Cost of Capital, kortweg WACC). De veranderingen van de rentabiliteit in de tijd geven aan dat de rentabiliteit van Tennet over het algemeen is toegenomen. Dit is globaal consistent met tariefregulering via tariefplafonds, aangezien een gereguleerde onderneming door kostenbesparingen de winst verhogen.
- De *rentedekking* tenslotte (rij 4) is een indicator voor de liquiditeitspositie van een onderneming. Het zegt hoeveel keer de rente kan worden betaald uit het brutobedrijfsresultaat. Het is met andere woorden de EBDITDA (resultaat vóór rente, belasting, afschrijvingen en verwerking van goodwill) gedeeld door de nettorente-uitgaven. Bij een rentedekking van minder dan 1 zijn de operationele inkomsten onvoldoende om de rente te kunnen betalen. De rentedekking was aanvankelijk, in 1999 en 2000, zeer laag; dit was waarschijnlijk het resultaat van de slechte solvabiliteitspositie en de lage behaalde resultaten. Na een periode met een relatief hoge rentedekking is deze in 2004 en 2005 weer gedaald.

Het algemene beeld dat uit deze financiële indicatoren naar voren komt is dat de financiële positie van Tennet, na een relatief slecht begin direct na liberalisering, intussen goed is. De solvabiliteits- en rentabiliteitspositie geven geen aanleiding om te veronderstellen dat Tennet genoodzaakt is om af te zien van grotere infrastructurele projecten. Naast deze mogelijkheid van investeren is ook de prikkel die Tennet heeft om te investeren van belang. Uit paragraaf 2.2.3 blijkt dat gereguleerde ondernemingen onder tariefplafonds weinig prikkels hebben om te investeren. In de volgende subparagraaf zal aan de hand van kwaliteitsindicatoren worden ingeschat of er aanwijzingen zijn dat er onderinvesteringen zijn.

Tabel 2.8 Tennet financiële kerninformatie

	2005	2004	2003	2002	2001	2000	1999
<b>Omzet (ml )*</b>	417.9	415.8	358.1	326.4	354.5	274.0**	237.9**
<b>Solvabiliteit*</b>	51.6%	42.9%	35.6%	43.3%	27.6%	18.3%**	17.1%**
<b>Rentabiliteit gemiddeld</b>							
<b>totaal vermogen*</b>	8.5%	6.4%	6.3%	7.1%	10.5%	4.7%**	1.5%**
<b>Rentedekking*</b>	4.3	7.8	10.2	12.6	10.4	2.4**	1.3**

\*: Tennet jaarverslag 2005 voor jaren 2001-2005; 2005 is op IFRS basis; daarvóór op Dutch GAAP basis; deze omzetcijfers zijn niet voor inflatie gecorrigeerd.

\*\* : Tennet jaarverslag 2001 – basis van cijfers voor 1999 en 2000 wijkt af van latere jaren.

### Kwaliteitsindicatoren

In Tabel 2.9 wordt voor de periode 1999-2004 de beschikbaarheid van koppelingen met lagere spanning netten en met buitenlandse netten gegeven. Dit is een, toegegeven beperkte, indicatie van de kwaliteit van Tennets hoogspanningsnet. Over de bekeken periode is deze beschikbaarheid tussen de 97% en 100% hoog te noemen; er zijn ook geen trends te bespeuren die erop wijzen dat de beschikbaarheid afneemt.

Tabel 2.9 Tennet informatie beschikbaarheid koppelingen

	2005	2004	2003	2002	2001	2000	1999
<b>Beschikbaarheid koppelingen</b>							
<b>lagere spanning netten (% tijd)*</b>	n.b.	98.9	99.2	99.7	99.3	98.9	97.6
<b>Beschikbaarheid koppelingen</b>							
<b>buitenland (% tijd)*</b>	n.b.	98.5	98.5	94.8	98.7	97.0	98.3

\* Het gaat hier om niet beschikbaarheid vanwege gepland onderhoud en projecten

Bron: Jaarverslagen Tennet

Tabel 2.10 maakt een vergelijking tussen Nederland en enkele andere Europese landen op het aspect van verloren minuten door ongeplande interrupties per afnemer. Deze interrupties hebben overigens betrekking op alle voltagenetten, niet alleen het hoogspanningsnet van Tennet. In de tabel steekt Nederland zeer gunstig af bij de andere landen.

**Tabel 2.10 Ongeplande interrupties, verloren minuten per afnemer per jaar (1999-2004)**

Land	1999	2000	2001	2002	2003	2004
Finland	198.00	129.60	468.00	284.40	212.40	103.00
Frankrijk	459.00	176.00	59.00	52.00	69.30	57.10
Groot Britannië			75.84	101.33	72.68	87.33
Hongarije	411.00	241.20	250.20	196.80	155.40	137.40
Italië	191.77	187.40	149.09	114.74	546.08	90.53
Ierland	273.60	257.90	199.30	230.20	171.90	162.80
Nederland	26.00	27.00	34.00	28.00	30.00	24.00
Portugal			530.74	467.98	406.18	217.79
Spanje	156.37	145.41	179.69	142.56	141.91	123.60
Zweden	165.77	89.17	162.90	101.84	148.05	59.73

Bron: CEER (Council of European Energy Regulators): Third Benchmarking Report on Quality of Electricity Supply, 2005

### ***Uitzonderlijke investeringsprojecten***

Tennet heeft momenteel een aantal uitzonderlijke investeringsprojecten lopen die betrekking hebben op het uitbreiden van de infrastructuur.

#### ***NorNed***

Op 30 december 2004 tekenden Tennet en het Noorse Statnett de overeenkomst voor de NorNed-kabel. Het project is gestart in januari 2005 en moet in 2008 operationeel zijn. Het betreft een kabel met een lengte van 580 km en een capaciteit van 700 MW. De geschatte totale projectkosten bedragen 600 miljoen €. De financiering van NorNed vindt gedeeltelijk plaats door de opbrengsten van Tennets TSO Auction. De DTe heeft onder voorwaarden goedgekeurd dat NorNed uit opbrengsten van de TSO Auction kan worden gefinancierd.<sup>7</sup> Daarnaast zorgt de Europese Investeringsbank voor een deel van de financiering en de Europese Commissie middels het jaarprogramma van TEN-E energie.

Tabel 2.11 geeft een overzicht van de opbrengsten van Tennet van de TSO-veilingen van interconnectorcapaciteit. Deze bedragen zijn in principe door Tennet aan te wenden voor infrastructuurprojecten die aan bepaalde voorwaarden voldoen (zie voetnoot).

**Tabel 2.11 Tennet opbrengsten TSO Auction**

	2005	2004	2003	2002	2001
Opbrengsten TSO auction (ml )	202.6	175.5	130.5	196.1	123.2

Bron: Tennet jaarverslagen

**Randstad380**

Randstad380 betreft de bouw van een aantal 380 kV-hoogspanningsverbindingen en enkele daarmee samenhangende 150 kV-hoogspanningsverbindingen, de bouw van nieuwe hoogspanningsstations en de uitbreiding van enkele bestaande stations.

**BritNed**

BritNed Development Limited (hierna BRITNED) heeft het voornemen een hoogspanningskabelverbinding tussen het Verenigd Koninkrijk en Nederland aan te leggen. De transportcapaciteit van deze 260 km lange kabelverbinding zal een capaciteit hebben van 1000. De joint venture vertegenwoordigt een waarde van € 600 miljoen. De aanleg van de verbinding gaat zomer 2007 van start en zal naar verwachting eind 2010 worden opgeleverd. Tennet rapporteert verder op haar website:

*“... BRITNED verhoogt de leveringszekerheid en leveringsdiversiteit. Daarnaast zorgt het project voor meer mogelijkheden voor de energiemarkt om deel te nemen aan de Europese elektriciteitsmarkten en wordt bijgedragen aan het waarborgen van de energievoorziening op beide markten...”<sup>8</sup>*

**Interconnectiecapaciteit**

In het eindverslag van de Europese Commissie van de Energy Sector Inquiry<sup>9</sup>, randnummer 23, wijst de Commissie op onderinvesteringen in interconnectiecapaciteit.

*“Wat betreft elektriciteit wordt de integratie afgeremd door ontoereikende interconnectiecapaciteit en door het ontbreken van afdoende prikkels om te investeren in additionele capaciteit, om zo sinds lang bestaande bottlenecks weg te werken...”*

Het (vermeende) tekort aan interconnectorcapaciteit waar de Europese Commissie op wijst kan moeilijk als een signaal van onderinvestering van Tennet worden geïnterpreteerd. In de eerste plaats betreft het niet de natuurlijke monopolie-infrastructuur waar dit rapport over gaat. Verder gaat het niet alleen om Tennet, maar ook om netwerkoperators in omliggende landen. Tenslotte spelen er ook andere overwegingen bij het aanleggen van interconnectorcapaciteit dan betrouwbaarheid en leveringszekerheid; de capaciteit is met name gewenst door de Europese Commissie om concurrentie in levering te stimuleren door meer internationale handel mogelijk te maken.

**Enkele conclusies**

Harde conclusies over het bestaan van onder- of overinvesteringen door Tennet zijn moeilijk te trekken. De huidige financiële positie van Tennet lijkt geen belemmering te zijn voor het plegen van investeringen. Dit leek op het moment dat Tennet ontstond uit SEP anders, met name als gevolg van de houding van lokale overheden ten aanzien van hun netwerken. Tennets transport tarieven

worden door DTe gereguleerd middels meerjarige tariefplafonds. De economische literatuur geeft aan dat juist deze vorm van tariefregulering het risico in zich draagt van onderinvesteringen, maar op basis van de bekeken kwaliteitsindicatoren lijkt de conclusie gerechtvaardigd dat dit risico zich tot nu toe niet heeft geopenbaard. Bovendien investeert Tennet, naast het gebruikelijke onderhoud en vervanging, ook in uitbreidingen van de bestaande infrastructuur.

#### 2.5.4 VASTE NET KPN

In deze paragraaf wordt een inschatting gemaakt van de prikkel om te investeren in het vaste net door KPN in Nederland. Net als bij de hoogspanningsnetten is ook hier de inschatting noodzakelijk kwalitatief en tot op zekere hoogte speculatief, omdat gedetailleerde informatie ontbreekt.

Hieronder zal in het eerste deel het proces van liberalisering, privatisering (KPN is nu 100% in private handen) en de regulering van KPN's vaste net door toezichthouder OPTA worden geschetst. In het tweede deel wordt de investeringspositie van KPN ingeschat, aan de hand van financiële kerncijfers en bijzondere investeringsprojecten. Tenslotte zullen enkele conclusies op een rij worden gezet.

##### ***Liberalisering, privatisering en regulering***

De kernpunten met betrekking tot initiatieven van marktwerking en het vaste net van KPN zijn als volgt.

- Ten tijde van de liberalisering in 1998 had het aansluitnet van KPN sterke natuurlijke monopolie-eigenschappen; inmiddels begint door de technologische ontwikkeling dat natuurlijke monopoliekarakter te verdwijnen en ontstaat concurrentie van kabelnetwerken waarover ook telefonie en diensten van breedband internettoegang worden geleverd.
- KPN is een verticaal geïntegreerd bedrijf met een netwerkinfrastructuur en retailactiviteiten; KPN is verplicht om concurrenten op retailniveau toegang te verlenen tot haar netwerk.
- KPN is inmiddels volledig geprivatiseerd.
- De interconnectie- en bijzondere toegangsdiensten (netwerkdiensten) van KPN worden door OPTA gereguleerd; aanvankelijk door middel van een vorm van rendementsregulering en daarna via meerjarige tariefplafonds (*incentive-regulering*).
- Naast tariefregulering is KPN ook onderworpen aan kwaliteitsregulering.
- Mede onder toenemende druk van de concurrentie voert KPN momenteel een uitgebreid investeringsprogramma uit om haar infrastructuur te moderniseren en geschikter te maken voor nieuwe diensten als IP-tv.

Elk van deze punten zal hieronder worden uitgewerkt.

### **Liberalisering: Telecommunicatiewet 1998 en de nieuwe Telecommunicatiewet 2004**

Liberalisering van de telecommunicatiemarkt in Nederland is sterk ingegeven door Europese regelgeving. Met het oog op de voltooiing van de interne markt werd de liberalisering van de telecommunicatiesector eind jaren tachtig een prioriteit in Europa. De liberalisering is in 1988 begonnen met het openstellen voor concurrentie van markten van telecommunicatie-eindapparatuur. Na het openstellen van satellietcommunicatie- en satelliet transmissiediensten in 1994 en kabeltelevisienetwerken en mobiele communicatie in 1996, besloot de Raad dat de markten voor spraaktelefoniediensten op 1 januari 1998 volledig moest zijn geliberaliseerd.

De Telecommunicatiewet 1998 implementeerde de liberalisering van de telecommunicatie-infrastructuur en de telecommunicatiediensten in Nederland. Hierin werden onder andere regels vastgelegd die stelden dat KPN (toen nog PTT Telecom) zijn netwerk open moest stellen voor nieuwe toetreders; in de Telecommunicatiewet 1998 werden deze netwerkdiensten interconnectie en bijzondere toegangsdiensten genoemd. In afwijking tot de Elektriciteitswet 1998 bevatte de Telecommunicatiewet 1998 geen bepalingen omtrent een afgescheiden netwerkbeheerder, die verder niet actief is in andere delen van de bedrijfskolom. Op 19 mei 2004 is de nieuwe Telecommunicatiewet in werking getreden, waarin aanpassing en aanvullingen op de Telecommunicatiewet 1998 zijn opgenomen

### **Privatisering: via verzelfstandiging geleidelijk afstoten van overheidsaandeel**

In 1989 wordt KPN (toen nog Staatsbedrijf der PTT) verzelfstandigd en omgevormd tot een privaatrechtelijke onderneming onder de naam Koninklijke PTT Nederland NV, waarbij de staat enig aandeelhouder werd.<sup>10</sup> Vóór die tijd stond het Staatsbedrijf der PTT onder de directe verantwoordelijkheid van de minister van Verkeer en Waterstaat. In 1994 stootte de Nederlandse Staat 30% van zijn aandelen af door een beursgang en in 1995 volgde nog eens 25%, waardoor de Staat niet langer een meerderheidsbelang had (hij behield nog wel een zogenaamd 'gouden aandeel' met substantiële zeggenschap). In de periode 1995 tot 2001 nam het relatieve belang van de staat verder af door nieuwe emissies van aandelen door KPN, waarin de staat niet participeerde.

In 2001 kwam KPN in zwaar weer terecht, onder andere vanwege de beurscorrectie van de internetbubble en vanwege de slechte schuldenpositie. In die tijd kondigde KPN een emissie aan van 5 miljard euro, waarin de staat pro rata deel nam.

In de jaren daarna is het overheidsbelang geheel afgebouwd. In 2003 heeft de staat via een aandelenverkoop het belang tot 19% teruggebracht. Vervolgens is begin 2005 het aandelenbelang gereduceerd tot 14% en begin 2006 tot circa 8% (toen is ook het gouden aandeel van de hand gedaan). Tenslotte is het belang definitief afgestoten in september 2006.

## Regulering

### Tariefregulering

Regulering van interconnectietarieven werd geregeld in Artikel 6.6, Telecommunicatiewet 1998, waar het volgende wordt gesteld: *“Aanbieders van vaste openbare telefoonnetwerken, vaste openbare telefoondiensten en van huurlijnen, . . . , dragen er zorg voor dat de tarieven voor interconnectie op transparante wijze worden bepaald en op kosten zijn georiënteerd.”*

Op basis van deze bepaling heeft OPTA KPN's interconnectietarieven door middel van jaarlijkse rendementsregulering begrensd. Het voert te ver om hier de gedetailleerde vorm van rendementsregulering te bespreken. Het is echter wel belangrijk om te vermelden dat de rendementsregulering van OPTA in bepaalde gevallen uitging van KPN's werkelijke kosten (Embedded Direct Costs, ofwel EDC), waar dan wel een 'efficiëntiekorting' op werd toegepast om alternatieve aanbieders niet te laten meebetalen aan een voor hen inefficiënte netwerkstructuur. In andere gevallen baseerde OPTA de rendementsregulering op een kostenmodel van een efficiënt netwerk (een zogenaamd *bottom-up*-model), waarbij alleen de 'incrementele kosten op de lange termijn' (*long-run incremental costs*) in de interconnectietarieven mochten terugkomen.

Deze correcties in de opgelegde rendementsregulering hebben als effect dat de in paragraaf beschreven prikkel tot overinvesteren onder rendementsregulering wordt ingeperkt en waarschijnlijk helemaal verdwijnt.

OPTA heeft KPN's interconnectietarieven van 1999 tot en met 2005 gereguleerd via boven beschreven rendementsregulering. In 2003 is wel overwogen om het systeem van de jaarlijkse rendementsregulering te vervangen door meerjarige tariefplafonds, maar daar zag OPTA indertijd van af. Onder de nieuwe Telecommunicatiewet 2004 heeft OPTA vanaf 2006 een meerjarig prijsplafond ingesteld (het zogenaamde Wholesale Price Cap-systeem).

### Kwaliteitsregulering

Een algemene vorm van kwaliteitsregulering werd vastgelegd in Artikel 9.1, lid 1 van de Telecommunicatie wet 1998: *“In het algemeen maatschappelijk belang worden bij algemene maatregel van bestuur openbare telecommunicatiediensten of daarmee samenhangende voorzieningen aangewezen die voor eenieder tegen een betaalbare prijs en een bepaalde kwaliteit beschikbaar moeten zijn.”*

Deze bepaling werd in de nieuwe Telecommunicatiewet 2004 aangepast: *“1. De volgende diensten [toegevoegd: waaronder vaste telefoniediensten] zijn voor iedere eindgebruiker, onafhankelijk van diens geografische locatie, tegen een betaalbare prijs en met een bepaalde kwaliteit beschikbaar: ... 2. Bij of krachtens algemene maatregel van bestuur worden regels gesteld over de kwaliteit van de in het eerste lid bedoelde diensten.”*

Vergeleken met de bepaling in de oude Telecommunicatiewet 1998 kunnen de kwaliteitsbepalingen nu vollediger worden uitgewerkt.

### Investeringspositie

#### Financiële indicatoren

Tabel 2.12 geeft een overzicht voor de periode 1995-2005 van de solvabiliteitspositie en de operationele marge van KPN.

- De *solvabiliteit* is weergegeven in rij 1. Met solvabiliteit wordt aangegeven in hoeverre een onderneming de financiële verplichtingen aan verschafters van vreemd vermogen kan nakomen met behulp van alle activa. Vóór liberalisering lag KPN's solvabiliteit tussen de 42% en 47%; in deze periode had de staat al geen meerderheidsbelang meer. Ná liberalisering is de solvabiliteit relatief snel gezakt tot een dieptepunt van 19.0% in 2002. In deze tijd deed KPN een aantal overnames (waaronder E-Plus in Duitsland) en investeerde een aanzienlijk bedrag in UMTS-vergunningen in Nederland en Duitsland. Met gedeeltelijke ondersteuning van de staat werd deze positie weer versterkt.
- De *operationele marge*: is weergegeven in rij 2. De operationele marge van een bedrijf geeft aan welke opbrengsten overblijven na aftrek van variabele kosten. Uit deze marge moeten vaste kosten worden betaald, waaronder bijvoorbeeld interest op vreemd vermogen en afschrijvingen op infrastructurele investeringen. Hier valt een vergelijkbaar patroon te bespeuren: na liberalisering verslechtert de operationele marge aanzienlijk om tussen 2002 en 2005 weer bij te trekken.

Tabel 2.12 KPN financiële kerninformatie\*

	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995
Solvabiliteit*	22.5%	27.7%	30.5%	19.0%	30.0%	30.6%	35.5%	43.3%	46.3%	47.0%	42.1%
Operationele marge**	19.7%	22.4%	24.1%	-43.7%	-112.3%	20.1%	11.5%	19.6%	20.8%	23.8%	22.5%

\* Solvabiliteit: eigen vermogen/totale activa

\*\* Operationele marge: operationeel inkomen/ operationele opbrengsten

Bron: verschillende KPN jaarverslagen; [www.investor.reuters.com](http://www.investor.reuters.com)

Het algemene beeld dat hier naar voren komt is dat de huidige financiële positie van KPN goed te noemen is. Na verzelfstandiging en met nog een minderheidsbelang in handen heeft de staat echter wel moeten ondersteunen toen KPN een zeer slechte vermogenspositie had. Dit geeft ook het politieke belang aan van een belangrijke nutsdienst als telecommunicatie; het risico van faillissement is kleiner, omdat de staat verwacht wordt in te grijpen. Het is onwaarschijnlijk dat de slechte vermogenspositie van KPN in 2001 op de een of andere manier samenhang met de

specifieke vorm van regulering die door OPTA was gekozen. Liberalisering kan wel een rol gespeeld hebben: door de sterkere concurrentiële druk voelde KPN zich genoodzaakt om zeer veel te investeren in een mobiele licentie en in overnames.

### **Bijzondere investeringsprojecten<sup>11</sup>**

#### **All-IP**

KPN is recentelijk begonnen met een drastische modernisering van haar vaste netwerk, het zogenaamde all-IP project. In het all-IP-plan van KPN zal het bestaande op koperdraad gebaseerde netwerk tussen 2007 en 2010 worden omgebouwd naar een glasvezelnetwerk dat reikt tot in de wijk. Tussen de straatkast en de woning blijft de bestaande koperdraad (vooralsnog) gehandhaafd. Met all-IP vervangt KPN haar huidige netwerk, dat (deels) bestaat uit aparte netwerken voor telefonie, huurlijnen, datacom-diensten en breedband internet, door één breedbandig all-IP-netwerk. Via dit netwerk kunnen alle soorten dienstverlening (bijvoorbeeld ook IP-televisie) worden geleverd.

All-IP is volgens KPN nodig om concurrerende infrastructuren te kunnen volgen in het aanbod van breedbandige dienstverlening. Een belangrijk element hierbij is dat kabelbedrijven steeds actiever worden op het gebied van vaste telefonie, door in toenemende mate bundels van verschillende diensten aan te bieden. Een kern-dienst in bundels van kabelondernemingen is analoge televisie, die wordt aangevuld met diensten als telefonie en/of breedband internettoegang. Om tegen deze bundels te kunnen concurreren, zo stelt KPN, moet KPN een kwalitatief goede televisiedienst aan kunnen bieden, en de all-IP-modernisering van het netwerk moet dit mogelijk maken. Verdere argumenten die KPN geeft voor de all-IP-plannen zijn om een kostenbesparing te realiseren en om het bestaande netwerk, dat het einde van zijn levensduur nadert, te vervangen.

All-IP bestaat in grote lijnen uit de volgende elementen. Het transmissienet wordt gebaseerd op IP/Ethernet waarmee grote hoeveelheden data snel over het netwerk getransporteerd kunnen worden. De bestaande circuit-geschakelde telefoniecentrales worden ontmanteld, evenals de bestaande 1.361 wijkcentrales. Van de bestaande 1.361 wijkcentrales blijven er ongeveer 130 à 200 over als Metro Core Location. Het deel van het aansluitnetwerk tussen de Metro Core Locations en de kabelverdeelkasten, ongeveer 28.000 in aantal, wordt verglaasd (*fibre to the curb*).

De all-IP-plannen resulteren in breedbandtoegang op basis van VDSL2 (met een maximale snelheid van 20 tot 50 Mb) en op basis van glas waar sprake is van *fibre to the home* of *fibre to the office* (met een maximale snelheid van 100 Mb).

KPN schat in dat de kosten van de all-IP-plannen ongeveer 1,5 miljard € bedragen. Een aanzienlijk deel daarvan wordt terugverdiend uit de verkoop van ongeveer 1.100 wijkcentrales die overbodig worden en die vaak in toplocaties in stadscentra gelegen zijn.

**Enkele conclusies**

Net als in het geval van Tennet zijn harde conclusies over investeringen in infrastructuur door KPN moeilijk te trekken. Met het all-IP-investeringsproject investeert KPN volop in de modernisering van haar netwerk. De belangrijkste motivatie hiervoor is de concurrentiële druk die KPN in toenemende mate voelt van met name kabelondernemingen, en dit is een direct gevolg van de liberalisering die heeft plaatsgevonden. Bij de all-IP-plannen doet zich wel de min of meer toevallige omstandigheid voor dat deze als integraal onderdeel van de plannen intern gefinancierd kunnen worden (door de verkoop van ontmantelde wijkcentrales) en er dus weinig beroep op de kapitaalmarkt hoeft te worden gedaan.

## 2.6 INVESTERINGEN IN INFRASTRUCTUUR EN HET BORGEN VAN PUBLIEKE BELANGEN

Het uitgangspunt in een markteconomie als de Nederlandse is om aan private ondernemingen de verantwoordelijkheid over te laten voor aspecten als prijzen, hoeveelheden, kwaliteit en investeringen van producten en diensten. In de meeste gevallen leidt het marktmechanisme ertoe dat de ‘juiste’ producten en diensten, in de ‘juiste’ hoeveelheden, tegen de ‘juiste’ prijzen, en met de ‘juiste’ kwaliteit tot stand komen. Ook is het zo dat over het algemeen private ondernemingen de ‘juiste’ investeringsbeslissingen nemen. ‘Juist’ betekent in dit geval dat de keuzes van private ondernemingen ook de sociale welvaart optimaliseren, met andere woorden ook in het belang zijn van de maatschappij als geheel. In de meeste gevallen dienen door het marktmechanisme private belangen dus ook de publieke belangen.

### 2.6.1 MARKTFALEN

In die gevallen waarbij het marktmechanisme niet leidt tot het sociaal gewenste resultaat is er sprake van ‘marktfalen’. In de zuiver economische betekenis geeft marktfalen aan dat het marktmechanisme niet leidt tot een optimale sociale welvaart (dit wordt hier ‘marktfalen I’ genoemd). In een ruimere betekenis kan marktfalen ook aangeven dat specifieke sociaal wenselijk geachte doelstellingen niet zonder meer worden verwezenlijkt in een vrije markt (‘marktfalen II’).

#### **Marktfalen I: sociale welvaart niet optimaal**

In netwerksectoren kan zonder overheidsinterventie marktfalen onder andere de vorm aannemen van monopolieacht, asymmetrische informatie en externaliteiten (dit zijn de belangrijkste vormen van marktfalen die hier aan de orde zijn). Bij monopolieacht, als gevolg van het natuurlijke monopolieacht van veel netwerkinfrastructuren, produceert een monopolist te weinig en rekent een te hoge prijs, hetgeen tot sociale welvaartsverliezen leidt. Ook kan het ertoe leiden dat er te weinig wordt geïnvesteerd in infrastructuur, omdat de sociaal optimale capaciteit toch niet wordt gebruikt.

Asymmetrische informatie, tussen vermogensverschaffers en vermogensvragers, tussen bestuurders en eigenaars of tussen bestuurders en politieke principalen, kost middelen om ermee om te gaan. Deze middelen vormen sociale kosten en gaan ten koste van de sociale welvaart.

Externaliteiten treden in dit geval op als beslissingen van netwerkbedrijven effecten hebben voor de sociale welvaart die niet worden meegenomen door die bedrijven bij die beslissingen. Hierbij valt te denken aan investeringen die het milieu positief of negatief beïnvloeden, maar waarmee geen rekening wordt gehouden bij de beslissing erover (en die daardoor wellicht niet of wel, respectievelijk, tot stand komen). Maar investeringen in technologische ontwikkeling, zoals nieuwe of verbeterde producten en processen, waarvan de opbrengsten niet geheel aan de beslissende onderneming ten goede komen, behoren ook tot deze categorie.

### ***Marktfalen II: niet halen van specifieke sociale doelstellingen***

De ruimere definitie van marktfalen omvat ook die gevallen waarbij het marktmechanisme niet tot een uitkomst leidt die als sociaal wenselijk wordt beschouwd, zelfs als de sociale welvaart wel zou worden geoptimaliseerd (en marktfalen I afwezig zou zijn).<sup>12</sup> Hiertoe behoren politieke doelstellingen als universele dienstverlening tegen een betaalbare prijs, een rechtvaardige inkomensverdeling (hiertoe kan ook behoren dat wenselijk wordt geacht dat niet eindgebruikers maar aandeelhouders de risico's van infrastructuur investeringen dragen), en een hoge leveringszekerheid en betrouwbaarheid van dienstverlening (voor zover die verdergaan dan wat een private onderneming zelf beslist).

## **2.6.2 MOGELIJKE REACTIES OP MARKTFALEN**

Marktfalen kan een reden zijn voor de overheid om te interveniëren in het marktproces en de uitkomst te corrigeren, zodat het falen verdwijnt of in elk geval vermindert. Mogelijke interventies van de overheid zijn onder te verdelen in drie groepen. Ten eerste kan de overheid een private onderneming nationaliseren of een exclusief recht toekennen (het spiegelbeeld van privatiseren en liberaliseren). Minder vergaande opties binnen deze groep zijn vormen van publiek-private samenwerking. Ten tweede kan de overheid private ondernemingen reguleren. De derde mogelijke reactie die de overheid openstaat is om niet in te grijpen, namelijk als de kosten van ingrijpen (ook 'overheidsfalen' genoemd) niet opwegen tegen de voordelen ervan in de vorm van verminderd marktfalen. Deze drie mogelijke reactie worden hierna toegelicht.

### ***Nationalisering en wettelijke monopolies***

Nationalisering van netwerkbedrijven kan bijdragen aan het oplossen van marktfalen in de vorm van monopolie-macht, asymmetrische informatie en externaliteiten. Monopolie-macht wordt behandeld door als overheid zelf de tarieven te bepalen, die niet worden ingegeven door winstmaximalisatie, maar door welvaartsmaximalisatie of andere, politiek wenselijk geachte doelstellingen.

Bepaalde problemen van asymmetrische informatie worden verzacht door nationalisering (maar verdwijnen niet). Er blijft informatieasymmetrie tussen de overheid als aandeelhouder en bestuurders van staatsondernemingen, maar hier is beter mee om te gaan. De overheid heeft als enige aandeelhouder een sterke invloed op het bestuur. Het bestuur kan ook expliciet andere doelstellingen dan het maximaliseren van winst nastreven.

Externaliteiten tenslotte kunnen worden geïnternaliseerd door ze expliciet mee te nemen in opgelegde doelstellingen. De overheid is hiertoe beter in staat als aandeelhouder dan als toezichthouder indien contracten onvolledig zijn.

Naast deze voordelen van nationalisering staan de in paragrafen 2.2.1 en 2.4.2 genoemde nadelen. Er is minder druk vanuit de kapitaalmarkt, hetgeen tot kosteninefficiëntie kan leiden. Uiteindelijk leidt dit tot sociaal gezien te hoge prijzen en te lage output – een vergelijkbare situatie als monopolieprijzen. De *soft budget constraint* heeft een vergelijkbaar effect en kan ook leiden tot verspillende overinvesteringen, omdat risico's te laag worden ingeschat.

Verder is een staatsbedrijf meer blootgesteld aan opportunistisch gedrag van de overheid, in de vorm van het veranderen van doelstellingen op de golven van politieke veranderingen. Dit kan langetermijninvesteringen in infrastructuur frustreren (opmerkelijk genoeg ook als een expliciete sociale doelstelling is om hoge betrouwbaarheid en leveringszekerheid te hebben).

Tenslotte lopen belastingbetalers feitelijk het aandeelhoudersrisico met de overheid als enige aandeelhouder, terwijl dit bij privaat eigendom alleen vrijwillige aandeelhouders zijn. In essentie raakt dit aan vraagstukken van inkomensverdeling.

*Concluderend kan worden gesteld dat nationalisering geschikter is om marktfalen II op te lossen, maar er bestaat wel een zeker risico dat marktfalen I wordt vergroot, in het bijzonder waar het investeringen in infrastructuur betreft. Dit laatste aspect kan 'overheidsfalen' worden genoemd.*

### **Regulering**

Regulering van private ondernemingen kan met name bijdragen aan het oplossen van monopoliekracht. Door het opleggen van maximumtarieven wordt de sociale welvaart verhoogd. Verder draagt regulering niet bij aan het oplossen van marktfalen in de vorm van asymmetrische informatie. Sterker nog: dit marktfalen kan zelfs toenemen, omdat een toezichthouder bestaande relaties compliceert. Regulering kan bijdragen aan het internaliseren van externaliteiten middels expliciete reguleringscontracten (over kwaliteit, betrouwbaarheid en leveringszekerheid), voor zover die mogelijk zijn. Indien aspecten als kwaliteit, betrouwbaarheid en leveringszekerheid niet of moeilijk contracteerbaar zijn, is nationalisering een betere optie (tenzij ervan uit mag worden gegaan dat private ondernemingen

deze aspecten uit zichzelf al voldoende ter harte nemen, in welk geval geen interventie wenselijker is).

Een belangrijk nadeel van de optie van regulering van private ondernemingen is dat het moeilijk is voor een toezichthouder om zich ertoe te binden geen opportunistisch gedrag te vertonen. Bij afwezigheid van een geloofwaardige *commitment device* tegen *regulatory opportunism* zullen investeringen in infrastructuur achterblijven, omdat de geregleerde onderneming vooraf inschat haar investeringen niet te kunnen terugverdienen. Verder is een nadeel dat er bij regulering onvermijdelijk de afruil dient te worden gemaakt tussen meer inspanningen om kosten te reduceren en het toestaan van statische welvaartsverliezen (monopolieprijzen) enerzijds en meer investeringen anderzijds. Een laatste nadeel is dat specifieke sociale doelstellingen bij regulering moeilijker te implementeren zijn dan bij privatisering.

*Concluderend kan worden gesteld dat regulering geschikt is om marktfalen I in de vorm van monopolie-macht te corrigeren, maar dat er zonder commitment van de overheid een zeker risico van onderinvesteringen in infrastructuur bestaat. Merk op dat de oorzaak van onderinvesteringen hier het risico van 'regulatory opportunism' is; bij nationalisering wordt het risico van onderinvestering veroorzaakt door opportunisme van de overheid als gevolg van de veranderlijkheid van doelstellingen. Regulering is minder geschikt om met marktfalen II om te gaan.*

### **Geen interventie**

Indien de nadelen van nationalisering en van regulering niet opwegen tegen de voordelen ervan, dan betekent dit dat de maatschappelijke kosten door marktfalen per saldo groter worden. Overheidsfalen is dan groter dan marktfalen. In dat geval is het beter vanuit sociaal oogpunt voor de overheid om niet te interveniëren en marktfalen trachten weg te nemen.

## NOTEN

- 1 Hierbij dient te worden opgemerkt dat een natuurlijk monopoliekarakter van een sector niet noodzakelijk blijvend van aard is. Om een voorbeeld te geven, door de technologische ontwikkeling op het gebied van telecommunicatie (meer precies, pakket-geschakelde transmissie) is het natuurlijke monopoliekarakter van het aansluitnet van KPN aan het verdwijnen en komen voor bepaalde telecommunicatiediensten alternatieve netwerken als kabelnetwerken in beeld. In paragraaf 2.5.4 van deze studie zal dit voorbeeld verder worden besproken.
- 2 Er bestaat ook een literatuur over gemengd oligopolie (*mixed oligopoly*) die de concurrentie bestudeert tussen private en publieke ondernemingen. Het verschil tussen beide typen ondernemingen is dat private ondernemingen worden verondersteld winsten te maximaliseren en publieke ondernemingen de sociale welvaart (de som van consumenten surplus en winsten, mogelijk met verschillende gewichten). De Fraja en Delbono (1989) vinden dat privatisering leidt tot hogere sociale welvaart indien het aantal staatsondernemingen relatief groot is in verhouding tot het aantal geprivatiseerde ondernemingen. Omdat deze studie zich met name richt op natuurlijke monopolies wordt deze literatuur hier niet verder besproken.
- 3 Dit artikel wordt ook uitgebreid aangehaald in het Centraal Planbureau rapport, 'Better safe than sorry? – reliability policy in network industries' (2004).
- 4 Er bestaat een uitgebreide recente literatuur over 'incomplete contracten', die onder andere ingaat op de grenzen en eigendom van ondernemingen (zie Tirole 1999).
- 5 Gans en King (2003) geven de volgende toelichting: "*This problem – where the potential for ex post access regulation 'truncates' the high end of the distribution of the possible returns to an investor in an essential infrastructure facility and so reduces the ex ante incentive to invest in the facility – is called the truncation problem . . .*"
- 6 Het is in dit verband interessant te lezen wat oud-secretaris-generaal van het ministerie van Economische Zaken Ad Geelhoed zegt over de periode vóór de Elektriciteitswet 1998, waar de aanvankelijke lage solvabiliteit een resultaat van was: "*De elektriciteitsproductie en -distributie waren in handen van provinciale en gemeentelijke openbare nutsbedrijven, meestal n.v.'s met de lagere overheden als aandeelhouders. . . . Het was . . . een publiek kartel. Wel een kartel met veel overleg, waarin insiders – gemeenten en provincies – aan het langste eind trokken en de afnemers (burgers en ondernemingen) geen andere rol speelden dan als betalers van een – te – hoge rekening. Ik heb vooral het verschijnsel gehekelnd dat de aandeelhouders van de openbare nutsbedrijven de winsten ervan gebruikten om hun begrotingen te spekken en de monopoliepositie van deze bedrijven misbruikten . . .*" (zie De Jong 2005).
- 7 Op basis van Artikel 31, lid 6, Elektriciteitswet 1998 kan Tennet onder bepaalde voorwaarden opbrengsten van de veiling van interconnectorcapaciteit gebruiken voor infrastructurele investeringen: "*De netbeheerder van het landelijk hoogspanningsnet benut de opbrengst van het veilen of op een andere marktconforme*

*methode toewijzen van capaciteit overeenkomstig de regeling, bedoeld in het vierde lid, voor het opheffen van beperkingen in de transportcapaciteit op landsgrens-overschrijdende netten dan wel voor andere, door de raad van bestuur van de mededingingsautoriteit te bepalen doelen.”*

- 8 Zie <http://www.tennet.org/tennet/nieuws/britned.aspx>.
- 9 Mededeling van de Commissie, Onderzoek op grond van artikel 17 van Verordening (EG) nr. 1/2003 naar de Europese gas- en elektriciteitssectoren (Eindverslag), Brussel, 10.1.2007, COM (2006) 851 definitief.
- 10 Voor de paragraaf is gebruikgemaakt van de achtergrondinformatie over KPN's privatisering in de Brief van Minister van Financiën aan de Tweede Kamer van 19 oktober 2006 over volledige privatisering van KPN (<http://www.minfin.nl/binaries/minfin/assets/pdf/actueel/kamerstukken/2006/10/fin06-925.pdf>).
- 11 In deze subparagraaf is gebruikgemaakt van informatie in OPTA (2006), *KPN's Next Generation Network: All-IP Issue paper*, OPTA/BO/2006/201599, 22 mei 2006, Openbare versie.
- 12 Dit is wat in de WRR-studie *Het borgen van publieke belang* (2000) de 'wat-vraag' wordt genoemd.

## LITERATUUR

- Alesina, R., S. Ardagna, G. Nicoletti en F. Schiantarelli (2005) 'Regulation and Investment', *Journal of the European Economic Association*, June 2005 3(4): 791-825.
- Averch, H. en L.L. Johnson (1962) 'Behavior of the Firm Under Regulatory Constraint', *American Economic Review*: 1052-1069.
- Baker, M. en J. Wurgler (2002) 'Market Timing and Capital Structure', *Journal of Finance*, February 2002, Vol. LVII (1): 1-32.
- Baumol, W. en A. Klevorick (1970) 'Input Choice and Rate of Return Regulation; An Overview of the Discussion', *Bell Journal of Economics*, 1(2): 162-190
- Better Regulation Taskforce, *Economic Regulators*, July 2001, United Kingdom Cabinet Office Publications & Publicity Team.
- Biglaiser, G. en M. Riordan (2000) 'Dynamics of Price Regulation', *Rand Journal of Economics*, vol. 31(4): 744-767.
- Brander en Lewis (1986) 'Oligopoly and Financial Structure: The Limited Liability Effect', *American Economic Review*, Vol. 76: 956-970.
- Brealey, R. en S. Myers (1984) *Principles of Corporate Finance*, McGrawHill, 2<sup>nd</sup> edition.
- Bucks, P. (2003) 'Financial Leverage and the Regulator', *Utilities Journal*, October 2003.
- Burns, P. en C. Riechmann (2004) 'Regulatory Instruments and their Effects on Investment Behaviour', *Utilities Policy* 12: 211-219.
- Centraal Planbureau (2004) 'Better safe than sorry? – Reliability policy in network industries', CPB rapport nr. 73, december 2004.
- Chang H., H. Koski en S. K. Majumdar (2003) 'Regulation and investment behaviour in the telecommunications sector: policies and patterns in US and Europe', *Telecommunications Policy*, 27 (2003): 677-699.
- Damme, E. van, R. Aalbers, A. Gielen en J. Sylvester (2003) *Privatisation in the Netherlands*, paper presented at the CESifo Conference Centre, Munich.
- Dasgupta, P. en V. Nanda (1993) 'Bargaining and brinkmanship – Capital structure choice by regulated firms', *International Journal of Industrial Organization* 11(4): 475-497.
- Department of Trade and Industry en HM Treasury (2004) 'The Drivers and Public Policy Consequences of Increased Gearing', October 2004.
- Dijk, T. van (1998) 'Prijnsregulering voor netwerkdiensten', *Economisch Statistische Berichten*, 27 maart 1998, 83: 253-256.
- Dijk, T. van (2001) 'General or Specific Competition Rules for Network Utilities?', *Journal of Network Industries*, 2: 93-111.
- Dobbs, I. M. (2004) 'Intertemporal price cap regulation under uncertainty', *Economic Journal*, Vol. 114, Issue 495: 421.
- Dommering, E.J., N.A.N.M. van Eijk, J.J.M. Theeuwes en F.O.W. Vogelaar (2001) *Toezicht en regulering in de telecommunicatiemarkt. Een analyse van sectorspecifiek en algemeen mededingingstoezicht*, rapport in opdracht van OPTA.
- Fremeth A. en G.M.F. Holburn (2006) *Regulatory Opportunism in Infrastructure Industries: Evidence from Rate Changes in the US Electricity Sector, 1980-2000*, Working Paper.
- Gans, J. en S. King (2003) 'Access Holidays for Network Infrastructure Investment', *Agenda*, Volume 10(2): 163-178.

- Greenstein, S., S. McMaster en P. Spiller (1995) 'The Effect of Incentive Regulation on Infrastructure Modernization: Local Exchange Companies' Deployment of Digital Technology', *Journal of Economics & Management Strategy*, 4(2): 187-236.
- Guthrie, G. (2006) 'Regulating infrastructure: The impact on risk and investment', *Journal of Economic Literature* (te verschijnen).
- Hart, O., A. Shleifer en R. Vishny (1997) 'The Proper Scope of Government: Theory and Application to Prisons', *Quarterly Journal of Economics* 112: 1091-1126.
- Hausman, J. (1999) 'Regulation by TSLRIC : Economic Effects on Investment and Innovation', MMR Beilage 3.
- Hausman, J. en S. Myers (2002) 'Regulating the United States Railroads: the Effects of Sunk Costs and Asymmetric Risks', *Journal of Regulatory Economics*, 22(3): 287-310.
- Jensen, M. en W. Meckling (1976) 'Theory of the Firm: Managerial Behaviour, Agency Costs, and Capital Structure', *Journal of Financial Economics*, 3 (1976): 305-360.
- Fraja, G. de en F. Delbono (1989) 'Alternative Strategies of a Public Enterprise in Oligopoly', *Oxford Economic Papers* 41 (1989): 302-311.
- Jong, J.J. de (2005) *Dertig Jaren Energiebeleid, Van Bonzen en Polders via Markten naar Brussel zonder Koolstof*, Clingendael Studies.
- Laffont, J.J. en J. Tirole (1993) *A Theory of Incentives in Procurement and Regulation*, MIT Press.
- Lyon, T.P. en J.W. Mayo (2000) 'Regulatory Opportunism and Investment Behavior: Evidence from the US Electric Utility Industry', January 2006, Working Paper.
- Milgrom, P. en J. Roberts (1992) *Economics, Organization and Management*, Prentice Hall.
- Modigliani, F. en M. Miller (1958) 'The Cost of Capital, Corporate Finance, and the Theory of Investment', *American Economic Review* 48: 261-297.
- Modigliani, F. en M. Miller (1963) 'Corporate Income Taxes and the Cost of Capital: a Correction', *American Economic Review* 53: 433-443.
- Myers S. en N. Majluf (1984) 'Corporate Financing and Investment Decisions When Firms Have Information that Investors Do Not Have', *Journal of Financial Economics*, 13: 197-216.
- Oldale, A. en J. Padilla (2004) 'From state monopoly to the "investment ladder": competition policy and the NRF', in *The Pros and Cons of Antitrust in Deregulated Markets*, Swedish Competition Authority.
- Ofwat en Ofgem (2006) *Financing Networks: a Discussion Paper*, Consultatiedocument.
- OPTA (2006) *KPN's Next Generation Network: All-IP Issue paper*, PTA/BO/2006/201599, 22 mei 2006, Openbare versie.
- Oxera (2005) 'Financing investment: can regulation adapt to new challenges?', *Agenda*, april.
- Oxera (2006) 'Incentivising infrastructure investment: the role of regulators', *Agenda*, februari.
- Richtlijn nr. 96/92/EG van het Europees Parlement en de Raad van de Europese Unie van 19 december 1996 betreffende gemeenschappelijke regels voor de interne markt voor elektriciteit (PbEG 1997, L27).
- Spiegel, Y. en P. Spulber (1994) 'The capital structure of a regulated firm', *Rand Journal of Economics*, Vol. 25(3): 424-440.

- Spiegel, Y. en P. Spulber (1997) 'Capital structure with countervailing incentives', *Rand Journal of Economics*, Vol. 28(1): 1-24.
- Tirole, J. (1999) 'Incomplete contracts: Where Do We Stand?', *Econometrica* 67(4): 741-781.
- Tirole, J. (2006) *The Theory of Corporate Finance*, MIT Press.
- Turvey, R. (2000) 'Infrastructure access pricing and lumpy investments', *Utilities Policy* 9: 207-218.
- Vickers, J. en G. Yarrow (1988), *Privatization: An Economic Analysis*, MIT Press.
- Wetenschappelijk Raad voor het Regeringsbeleid (2000) *Het borgen van publiek belang*, WRR rapport 56, Sdu Uitgevers, Den Haag.



### 3 PLANNING VAN WEGINFRASTRUCTUUR: ENKELE AANKNOPINGSPUNTEN VOOR VERBETERING

*A.A. van Duijn*

#### 3.1 INLEIDING EN PROBLEEMSTELLING

##### 3.1.1 INLEIDING

*De Stropelige Staat* is de titel van een boekje van Marc Chavannes met als ondertitel *Kanttekeningen bij de liefste democratie op aarde* (Chavannes 1994). Chavannes vertelt in *De Stropelige Staat* een aantal verhalen over besluitvorming met betrekking tot infrastructuur en laat zien hoe ingewikkeld, langdurig en ontoegankelijk die processen zijn. Een van deze verhalen speelt zich af in een rokerig zaaltje in Opijnen waar burgers inspreken op de dijkverzwaringsplannen van het rijk. Zij verzetten zich onder andere tegen gedwongen verhuizing en afbraak van woningen. Volgens dit verhaal heeft de minister van Verkeer en Waterstaat een alleraardigste ingenieur naar het roerige volkje gestuurd: “het is een waterbouwer van het open type, gereformeerd, vrijgemaakt en ontspannen. Hij is gekomen om te horen wat de mensen dwars zit.” Na heftige discussies zegt de ingenieur uiteindelijk toe dat er twee proefprojecten zullen worden uitgevoerd en bovendien zal hij de problemen van de burgers “meenemen naar den Haag”.

Met dit verhaal wil Chavannes duidelijk maken dat politici hun verantwoordelijkheid niet nemen en zich achter deskundigen verschuilen. De deskundigen op hun beurt doen wat politici zeggen en zo verschuilt iedereen zich achter iedereen. Niemand blijkt echt verantwoordelijk te zijn voor de knelpunten in de publieke besluitvorming, waardoor veel problemen blijven bestaan. Gevolg hiervan op het terrein van weginfrastructuur is dat het ons als samenleving niet lukt een optimaal niveau van infrastructuur tot stand te brengen. Of, zoals nogal eens moedeloos wordt geconstateerd: “files, we zullen er mee moeten leren leven”.<sup>1</sup>

Dit verhaal van Marc Chavannes is er slechts een uit een onafzienbare stroom van artikelen, onderzoeken en commentaren waarin alle overheden worden bekritiseerd met betrekking tot hun verantwoordelijkheid voor de mobiliteit en dus voor een adequate weg-, rail- en waterinfrastructuur. In de publieke discussies beschouwt men het kennelijk als een publiek belang dat de overheid zorgt voor een goede bereikbaarheid.

Om aan deze vrijwel voortdurend klinkende kritiek vanuit de media, de politiek en de wetenschap tegemoet te komen zijn op rijksniveau de afgelopen decennia vele initiatieven genomen. De publicatie *Krachtenfusie in de inrichting van Nederland* bevat een aantal voorbeelden van deze initiatieven en voorstellen voor vernieuwing. De directeur-generaal Rijkswaterstaat Keijts stelt daarin dat het werken aan nieuwe besluitvormings- en samenwerkingsconcepten geen

verschrikte reflex is op die kritische discussies, maar een logische stap in een continu vernieuwingsproces dat al in de jaren zeventig in gang werd gezet (Keijts 2006: 13). Zo is een methodiek ontstaan die zeer sophisticated is en onder invloed van deze maatschappelijke ontwikkelingen toenemende aandacht besteedt aan economische, sociale en milieuaspecten.

Met deze aanpassingen in het besluitvormingsproces probeert de rijksoverheid aan te sluiten bij een aantal ontwikkelingen in de samenleving waarvan volgens Van der Heijden de belangrijkste is de toenemende aandacht voor de burger en als component daarvan de afnemende gerichtheid op de departementale belangen (Van der Heijden 2005). Deze trends hebben geleid tot experimenten en onderzoeken naar interactieve beleidsvorming waaronder zaken als ketenregie en vraag- en netwerksturing. Ook op het terrein van de besluitvorming met betrekking tot infrastructuur zijn er tal van experimenten en onderzoeken naar interactieve beleidsontwikkeling gedaan zoals bijvoorbeeld in het Infrastructuur Laboratorium (Infralab) (Dauvellier et al. 2006: 324-328). Dit Infralab dat in de periode 1994-1996 werd georganiseerd had twee doelstellingen.

Allereerst was het streven erop gericht de kloof tussen burger en overheid te overbruggen en het tweede doel was het tot stand brengen van “nieuwe innovatieve oplossingen voor verkeer- en vervoerproblemen”. Door in een vroegtijdig stadium van besluitvorming naar samenwerking met externe partijen te streven in plaats van het geven van inspraak als de plannen al in een vergevorderd stadium zijn werd onderzocht of de genoemde kloof kon worden verkleind. De werkwijze van Infralab hield verder in dat de problematiek werd gezien als een gezamenlijk probleem van meerdere partijen en dat vooral ook gemeenten – die in de betreffende cases aanvankelijk meenden dat er niet echt naar hen werd geluisterd – bij de besluitvorming werden betrokken. Een van de voorstellen was dan ook in de nieuwe generatie besluitvormingsprocessen ruimte te scheppen voor creativiteit (Enthoven en Van Zijl 2006: 200, 202).

Schwarz beschrijft een geheel nieuw en open besluitvormingsproces dat werd ontwikkeld voor de aanleg van een groot baggerspeciedepot in het Hollands Diep ter hoogte van het pittoreske stadje Willemstad en tegen de aanleg waarvan de bewoners en gemeente zich met succes hadden verzet. Drie jaar later, na een gezamenlijke zoektocht met alle stakeholders, kon een nieuwe oplossing worden gepresenteerd die goedkoper en beter was en waartegen geen bezwaren werden ingediend (Schwarz 2007). Als voorwaarden om de publieke belangen in de besluitvorming te realiseren noemt Schwarz met name het opzetten van een goed leerproces, een gemeenschappelijke kennisbasis en een heldere probleemdefinitie.

Ondanks deze aanzienlijke veranderingen klinkt er nog regelmatig kritiek op het gehele proces van voorbereiding en uitvoering van aanleg en onderhoud van infrastructuur.<sup>2</sup> Problemen bij de uitvoering van projecten kunnen stevast rekenen op belangstelling in de media, burgers klagen over de ingewikkeldheid van

het proces en politici uiten nogal eens kreten van machteloosheid als projecten te laat gereed komen of de kosten weer blijken tegen te vallen. De fileproblematiek leidt op gezette tijden tot de roep om meer en snelle aanleg van infrastructuur. En gemeenten hebben anno 2007 nog steeds reden tot klagen over de wijze waarop ze bij infrastructuurprojecten worden betrokken.<sup>3</sup>

De politiek en bestuurders, de wetenschappelijke disciplines, de media en de overige stakeholders bieden een mêlee aan opvattingen, visies en belangen en beïnvloeden daarmee de totstandkoming van de infrastructuur. In de economie is de opvatting dominant dat de overheid alleen de taken voor haar rekening neemt die door het tekortschieten van de marktwerking – zogenaamde efficiencytekorten – op de betreffende goederenmarkten niet door het bedrijfsleven geleverd kunnen worden. Maar aangezien deze zaken toch gedaan moeten worden vanwege het publieke belang dat eraan wordt toegekend is de overheid gelegitimeerd tot productie hiervan over te gaan. Echter, de overheid kan bij de uitvoering van deze taken eveneens tekortschieten, zodat ook daar efficiëncynadelen kunnen optreden.

Doel van dit hoofdstuk is naar aanknopingspunten te zoeken voor verbeteringen in het gehele besluitvormingsproces van infrastructuur. Dergelijke verbeteringen komen ten goede aan de publieke belangen die met infrastructuur gemoeid zijn en leiden in economische termen geformuleerd zodoende tot vergroting van de maatschappelijke welvaart en zijn in veel gevallen ook economisch efficiënt.

### 3.1.2 PROBLEEMSTELLING

In de actuele discussies over de tekortkomingen in de besluitvorming over infrastructuur gaat het – summier samengevat – om met name de volgende aspecten:

- Politieke besluitvorming. Volgens het onderzoek van de provincie Zuid-Holland naar de factoren die de uitvoering van infrastructurele werken belemmeren blijkt dat het politiek-bestuurlijke proces in het algemeen de belangrijkste factor is die de projectvoortgang vertraagt (Provincie Zuid-Holland 2005). Met name daar waar de politieke besluitvorming zich uitstrekt over diverse gremia (gemeente, stadsregio en provincie) vraagt de spreiding van verantwoordelijkheden veel tijd.
- De wijze van omgaan met informatie. Twee parlementaire onderzoekscommissies hebben zich hierover gebogen. De Parlementaire Enquêtecommissie Bouwnijverheid (2002) sprak het vermoeden uit dat de benadeling van burgers en overheid door kartelafspraken een prijsverhogend effect van tien procent heeft gehad (Parlementaire Enquêtecommissie Bouwnijverheid 2002).
- De Parlementaire Onderzoekscommissie Infrastructuurprojecten (commissie-Duijvestein) concludeerde onder andere dat de Tweede Kamer nog al eens buiten spel stond en niet volledig werd geïnformeerd (Tijdelijke Commissie infrastructuurprojecten 2004-2005).
- Tekortkomingen in de afwegingsmethoden zoals maatschappelijke kosten-batenanalyse (mkba). Veel aannamen die nodig zijn om de berekeningen van

MKBA's te kunnen uitvoeren zijn subjectief en omstrede (Spaink 2006: 87). Ook blijken deze methoden nog wel eens onvolledig te zijn vanwege bijvoorbeeld te geringe aandacht voor leefbaarheid en regionale ontwikkeling.

Uitgangspunt in deze paragraaf is dat genoemde tekortkomingen negatieve gevolgen hebben voor de publieke belangen van infrastructuur en dat voorkoming of aanpassing hiervan het planningsproces kan verbeteren en de maatschappelijke baten ten goede komt. Daarom wordt begonnen met een inventarisatie van publieke belangen aan de realisatie waarvan infrastructuur bijdraagt. Kennis van deze belangen kan vervolgens inzicht geven in factoren die ze schaden.

Publieke belangen doen zich niet alleen op landelijk niveau voor, maar ook op lokaal en regionaal niveau. Daarom wordt met name ook aan de publieke belangen op gemeentelijk niveau aandacht besteed.

Na deze inventarisatie wordt een aantal factoren geselecteerd en besproken die deze belangen in ongunstige zin beïnvloeden. Deze factoren betreffen de methode van het selecteren van infrastructuur, het in beeld brengen van lange termijnontwikkelingen die de behoefte aan infrastructuur beïnvloeden en bestuurlijke fragmentatie.

### **3.1.3 WERKWIJZE**

De werkwijze in deze paragraaf bestaat uit het verrichten van een literatuurstudie en houden van een aantal interviews. Onder andere met de volgende personen zijn gesprekken over deze materie gevoerd:

E. Merrienboer, wethouder gemeente Eindhoven,  
K. Wassenaar, wethouder gemeente Leiderdorp,  
W. Leussink, deelgemeente Charlois, Rotterdam,  
R. van Bochove, gemeente Ridderkerk.

Doel is slechts een aantal terreinen op te sporen die zich lenen voor nader onderzoek voor eventuele verbeteringen in de besluitvorming. Het gaat er hier dus niet om kant en klare oplossingen aan te dragen.

De inhoudsopgave is na dit inleidende hoofdstuk als volgt: paragraaf 3.2 De publieke belangen van weginfrastructuur; paragraaf 3.3 Aanknopingspunten voor verbetering van het planningsproces bij aanleg en onderhoud van weginfrastructuur; paragraaf 3.4 Tot slot.

## **3.2 DE PUBLIEKE BELANGEN VAN WEGINFRASTRUCTUUR**

### **3.2.1 HET PUBLIEKE BELANG**

Het bestaansrecht van de overheid dient volgens de dominante opvatting in de economie gevonden te worden in het marktfalen. Marktfalen rechtvaardigt het

overheidsop treden. Een vlekkeloos werkende overheid produceert goederen en diensten op een betere manier dan de marktsector.

De factoren die de werking van goederen- en dienstenmarkten belemmeren en zodoende het motief voor overheidsingrijpen bieden zijn volgens Whynes en Bowles: het collectieve (d.w.z. ondeelbare) karakter van de betreffende goederen, gebrek aan mededinging door het bestaan van monopolie macht, tekortschietende informatie, het optreden van externe effecten (waardoor de werkelijke kosten en baten van de betreffende activiteit niet worden weergegeven) en ten slotte het bestaan van onzekerheid met betrekking tot het economisch handelen (Whynes en Bowles 1989). Onzekerheid heeft te maken met het ontbreken van informatie over toekomstige ontwikkelingen die niet geheel door verzekeringen zijn af te dekken.

Door het tekortschieten van de markten ontstaat er reden voor de overheid de levering van de betreffende goederen en diensten ter hand te nemen. Aan deze goederen wordt een algemeen belang gehecht: zij zullen er moeten komen ondanks het gegeven dat private markten geheel of gedeeltelijk verstek laten gaan. De publieke sector voorziet in de levering van deze goederen: dat is het publieke belang.

Deze overheersende opvatting in de economie dat de overheid geboren wordt uit marktfalen gaat echter voorbij aan opvattingen in de moderne welvaartseconomie dat de overheid wel degelijk ook zelfstandige bestaansredenen heeft (Hennipman 1962).

“Het hoofdprobleem betreffende de individualistische interpretatie van de welvaart is evenwel gelegen in het uitschakelen van de overheid als een zelfstandig economisch subject en van haar eigen doelstellingen. (...) Het ligt voor de hand, het welvaartsbegrip mede op de overheid als zodanig toe te passen en het verwezenlijken van de eigen doelstellingen der overheid onder de maatschappelijke welvaart te begrijpen” (Hennipman 1962: 60-62).

Deze opvatting van Hennipman e.a. over de bestaansredenen van de overheid laat ruimte voor het zelfstandig kiezen van de publieke belangen: de overheid kan bepaalde activiteiten ondernemen die zij zelf noodzakelijk acht zonder steeds naar de markt toe te moeten motiveren waarom dat niet aan de markt kan worden overgelaten. In de dominante opvatting dat de legitimatie van overheidshandelen ligt in marktfalen zit overigens de complicatie dat ook de overheid tekort kan schieten. Bij overheidsfalen wordt betoogd dat dan weer de taken aan de markt dienen te worden overgedragen. Dit overheidsfalen op zijn beurt is de reden van de uitvoerige discussies over privatisering en meer samenwerken van de overheidssector met de marktsector.

De Raad voor Verkeer en Waterstaat noemt in zijn rapport *Hoezo marktwerking...?* de volgende publieke belangen op het terrein van de infrastructuur ten behoeve van mobiliteit:

- voor de burger: keuzevrijheid, betaalbaarheid, bereikbaarheid en betrouwbaarheid;

- algemene collectieve belangen: veiligheid en duurzaamheid en
- nationaal-economische belangen in de vorm van handhaving of verbetering van de positie van het Nederlandse bedrijfsleven (Raad voor Verkeer en Waterstaat 2004: 37).

Op lokaal niveau kunnen hier nog twee publieke belangen aan worden toegevoegd: creëren van werkgelegenheid en genereren van inkomen.

De publieke belangen die bij concrete infrastructuurprojecten een rol spelen worden overigens zelden of nooit in de beleidsstukken helder geformuleerd. Zij blijven meestal erg abstract en het is lang niet altijd duidelijk om welk belang het precies gaat (Wynia 2006: 25). Ook in de RAW-bestekken voor infrastructuur is het volgens Wynia moeilijk het verband te leggen met de achterliggende publieke belangen (Wynia 2006: 70, 82).

Hoewel dus het handelen van de overheid gelegitimeerd wordt door het tekortschieten van marktpartijen wordt bij de aanleg, beheer en onderhoud van deze infrastructuur wel samengewerkt met het bedrijfsleven. Tot tien à vijftien jaar geleden bestond de contractvorm waarin overheden afspraken maakten uit traditionele contracten over uit te voeren bestekken. Onder invloed van overheidsfalen ontstonden er nieuwe contractvormen waarbij langzaam maar zeker steeds meer verantwoordelijkheden – en daarmee delen van de publieke taken – bij het bedrijfsleven kwamen te liggen. Een recent voorbeeld van een dergelijk contract is het Design, Build, Finance and Maintain (DBFM) contract dat in 2003 voor het eerst is afgesloten ten behoeve van de reconstructie van de weg N50 tussen Rosmalen en Geffen tot autosnelweg A59. Bij een DBFM contract ligt de verantwoordelijkheid voor het ontwerpen, de bouw, financiering en ook het onderhoud van de weg, de viaducten en geluidsschermen bij een consortium van bedrijven. Enkele banken staan garant voor de financiering van het project. De looptijd van het contract is achttien jaar: een bouwperiode van drie jaar en een onderhoudstermijn van vijftien jaar.

De overheid wordt eigenaar van de weg en betaalt de bouwers een premie voor het beschikbaar stellen. Geraamd wordt dat de totale projectkosten 15% lager zijn dan bij de gebruikelijke contractvorm, terwijl de infrastructuur bovendien sneller gereed komt en een goede kwaliteit zal worden geleverd.

Op grond van zijn onderzoek bij een aantal aannemers constateert Wynia dat “een sector die het werken op basis van functionele specificaties als een moeizaam verhaal ervaart, die innovatieve contractvormen associeert met een niet te overzien risico en die onvoldoende rendement verwacht duidelijk niet klaar is voor het nemen van meer verantwoordelijkheden” (2006: 69). Bovendien “blijken de aannemers over het algemeen weinig positief te zijn over innovatieve contractvormen en zien zij daarin diverse tekortkomingen” (2006: 70).

### 3.2.2 HET PUBLIEKE BELANG OP LOKAAL NIVEAU

De in 2.1 beschreven publieke belangen gelden voor alle overheidsniveaus, hoewel er accentverschillen tussen de verschillende overheden vallen waar te nemen.

Op lokaal – gemeentelijk – niveau blijkt er een sterk accent te liggen op werkgelegenheid en het genereren van inkomens en spelen ook leefbaarheid en gezondheid van de bewoners van de betreffende (en omliggende) gemeenten vaak een grote rol. Dat blijkt althans uit een aantal interviews met gemeentebestuurders en ambtenaren dat in het kader van dit hoofdstuk is gehouden.

Op lokaal niveau wil men zeker de bereikbaarheid, economische groei en concurrentiepositie versterken, maar dan vooral met het oog op de achterliggende doelstellingen van werkgelegenheid en inkomensgroei van de eigen burgers. En dat alles onder de voorwaarde dat leefbaarheid en gezondheid gevrijwaard blijven van extra schade en zo mogelijk liefst verbetert. Dat is bijvoorbeeld een van de motieven van de gemeente Leiderdorp om mee te werken aan verbreding van de A4 ter plaatse. Leiderdorp heeft verzocht een verlengde tunnelbak in de A4 aan te leggen ten behoeve van de verbetering van de leefbaarheid van zijn inwoners. Voor deze verbetering van de leefbaarheid moet (onder andere) Leiderdorp € 18 miljoen bijdragen (op een totale gemeentelijke begroting in 2008 van 103 miljoen incl. 60 miljoen grondexploitatie). Het rijk ziet geen reden om deze verbetering van de leefbaarheid van – uiteindelijk toch ook zijn burgers – volledig te financieren.

Veel steden zitten geheel (bijv. Rotterdam) of gedeeltelijk ingeklemd tussen de infrastructuur van hoofdwegen en rail. De oorzaak hiervan gaat voor een belangrijk deel terug tot het opheffen van de Vestingwet in 1874. Onder invloed van deze wet mocht er buiten de stadsmuren niet in het schootveld van de stadskanonnen worden gebouwd, zodat daar veel ruimte open bleef. Met het opheffen van deze wet kwamen er goede locaties beschikbaar voor de aanleg van allereerst de spoorwegen en later het hoofdwegenet. Verbeteringen of aanpassingen die het rijk daarom voorstelt worden dan ook wel als een kans gezien om iets van die oude situatie van voor de aanleg van spoor- of hoofdweg terug te krijgen. Om die reden wilde Rotterdam aanvankelijk bij de verbreding van de A15 een viaduct over de weg hebben, teneinde zodoende te trachten iets van de oude ecologische hoofdstructuur te herstellen. Getracht werd om door middel van meerdere oversteken over de rijksweg een netwerk voor langzaam verkeer te creëren.

Het gemeentelijk beleid is er in veel gevallen op gericht geweest zoveel mogelijk lokaal verkeer op het hoofdwegenet af te wikkelen. Via het hoofdwegenet diende het snelverkeer zo dicht mogelijk bij de bestemming uit te komen. Met de bedoelde oversteken proberen gemeenten zo ook weer het verkeer in de omgeving terug te brengen.

In de gesprekken met bestuurders van de lokale en regionale niveaus zijn de volgende suggesties gedaan om hun publieke belangen beter tot uitdrukking te laten komen in het gehele proces van aanleg en onderhoud van infrastructuur.

- Op rijksniveau zou de verplichting moeten worden ingevoerd om in de verkenningfase van het planvormingsproces belanghebbende gemeenten te

betrekken door ze zeer vroegtijdig te informeren over de plannen en de onderzoeken die worden gedaan. Het landsdeeloverleg dat het rijk met andere overheden voert, vinden lokale bestuurders lang niet altijd toereikend. Gemeenten moeten in deze fase in staat worden gesteld zaken die ze willen laten onderzoeken in te kunnen brengen. De alternatieve onderzoeken die de gemeenten willen laten doen worden op centraal niveau meegenomen.

- Een verdergaande stap zou zijn de verkenningfase te beginnen met een creatieve fase waarin alle belanghebbenden suggesties voor oplossingen kunnen aandragen (Enthoven en Van Zijl 2006: 200, 202). Nu is het vaak zo dat na het Tracébesluit zich nog belanghebbenden melden die mee willen praten of dat andere partijen geheel nieuwe varianten voorstellen. Ingeval er een dergelijke creatieve fase bestaat en de betrokkenen de zekerheid hebben dat óók hun varianten worden onderzocht, wordt het risico op centraal niveau kleiner van het steeds maar weer opnieuw analyseren van nieuwe varianten. In de praktijk komt het nu veelvuldig voor dat – met modelberekeningen en onderzoeken – tijdens het planvormingsproces nieuwe oplossingsmogelijkheden onderzocht moeten worden. Vanzelfsprekend leidt dat tot aanzienlijke tijdsverliezen en derhalve kostenstijgingen.

Op deze wijze hoeven gemeenten zich minder zorgen te maken als er een infrastructuurproject voor aanleg of verbetering op hen afkomt en kan het voor alle belanghebbenden nuttig zijn hieraan mee te doen. Op die manier wordt vermeden dat: “technische oplossingen worden uitgewerkt voor het capaciteitsprobleem van de weg zonder deze voldoende met de betrokken gemeenten te bespreken” (Provincie Zuid-Holland 2005).

- Op rijksniveau wordt er vaak naar gestreefd projecten te begrenzen met het oog op de beheersbaarheid. Projecten moeten echter niet begrensd worden opgezet maar integraal. Van projecten wordt nu ook meestal wel gezegd dat ze integraal zijn. Met deze integraliteit wordt dan hoofdzakelijk bedoeld dat de effecten met betrekking tot economie, milieu en veiligheid worden meegenomen. Integraliteit moet echter ruimer worden gezien en eveneens betrekking hebben op de inhoudelijke aspecten in een bepaald gebied zoals de herstructurering van stadswijken, de bouw van vinex-locaties, de aanleg van een spoorlijn, de verbreding van weginfrastructuur en de aanleg van bedrijventerreinen of een natuurgebied (Van Bochove 2006: 14, 43-44).
- Het is vaak onduidelijk hoe lang de verkenningfase (en het gehele nationale planningsproces) duurt. Voor lokale overheden is dat vaak verwarrend en veroorzaakt het veel kosten. De verkenningfase moet tot een bepaalde duur worden beperkt.
- Gemeenten krijgen alle inpassingskosten – die het lokale belang te boven gaan – vergoed.
- Gemeenten krijgen extra middelen voor bijvoorbeeld projectmanagement, ten behoeve van de noodzakelijke activiteiten die rijkswegprojecten met zich meebrengen.
- Gefragmenteerde besluitvorming met betrekking tot maatregelen die ruimtelijke aspecten betreffen moet zoveel mogelijk worden voorkomen. Het rijk, de provincies, de samenwerkende gemeenten en de waterschappen hebben vaak

- afzonderlijke, niet afgestemde procedures en gaan daarmee vaak hun eigen gang. Met name de provincie als zijnde het tussenbestuur zou hier een sterk coördinerende rol kunnen spelen. Gemeenten moeten vroegtijdig geïnformeerd worden en serieus worden genomen. Als dat gebeurt, hebben zij ook de taak ervoor te zorgen dat ze een visie hebben en weten wat ze willen. Het centraal niveau heeft er belang bij als er meerdere probleemeigenaren zijn.
- Naast milieu en economie krijgt ook leefbaarheid afzonderlijke aandacht in maatschappelijke kosten-batenanalyses.
  - In maatschappelijke kosten-batenanalyses en verkeerskundige studies staat vaak de verbetering van de reistijd van het doorgaande verkeer centraal. Gemeenten zijn meer geïnteresseerd in lokale en regionale economische ontwikkeling (werkgelegenheid) dan in verbetering van deze reistijd van het doorgaande verkeer. Daarom moet ook de bijdrage aan de regionale economische groei in analyses worden meegenomen.
  - Aanbestedingsvoordeel delen. Ingeval de aanbesteding voordeliger uitpakt dan aanvankelijk geraamd werd, zou dit voordeel door alle partijen die bijdragen in de financiering gedeeld moeten worden. Een dergelijk voordeel gaat dus niet alleen naar de aanbestedende rijksoverheid, maar ook onder andere naar de gemeenten.

### 3.3 AANKNOPINGSPUNTEN VOOR VERBETERING VAN HET PLANNINGSPROCES BIJ AANLEG EN ONDERHOUD VAN WEGINFRASTRUCTUUR

#### 3.3.1 INLEIDING

De visie van de nota *Mobiliteit Benutten, bouwen en beprijzen* moet worden gerealiseerd met een investeringsprogramma van ruim 80 miljard euro tot 2020. Twee belangrijke doelstellingen daarbij zijn de files in 2020 met 40% te verminderen ten opzichte van het jaar 2000 en er voor te zorgen dat 95% van de reizigers een voorspelbare reistijd heeft.

Naast het langetermijnbeleid lopen er anno 2007 enkele korte termijn programma's die beogen de wegmobiliteit te verbeteren, waaronder het wegaanpassingsprogramma Zichtbaar, Slim, Meetbaar (ZSM) en de programma's Filevermindering en het Groot Onderhoud aan de Weg.

De politiek heeft de afgelopen jaren regelmatig pogingen ondernomen de procedures rond de besluitvorming over infrastructuur te verbeteren. In 2006 is de regering bij motie van Verhagen verzocht een nieuwe inspanning te leveren om de vele procedures te vereenvoudigen, te versnellen en te bundelen en de invoering van een één besluitregel mogelijk te maken. De motie Hofstra verzoekt een brede commissie in te stellen ter voorbereiding van voorstellen voor versnelling en stroomlijning van de besluitvorming over infrastructuurprojecten.

De begroting van het ministerie van Verkeer en Waterstaat is te vinden in hoofdstuk XII van de rijksbegroting. De totale begroting 2007 bedraagt 7,5 miljard euro waarvan 6,6 voor bijdragen aan het Infrastructuurfonds (IF) en de Brede Doeluit-

kering (BDU). Daarnaast is de minister van v&w nog verantwoordelijk voor de begroting van het IF. Doel van dit fonds is te zorgen voor de financiële middelen voor infrastructuur. De projecten in dit fonds moeten onderworpen worden aan een integrale afweging.

Naast de uitgaven voor aanleg en onderhoud van hoofdwegen bevat het ook de financiële middelen voor vaarwegen en hoofdwatersystemen, voor hoofdtraininfrastructuur en voor de aanleg van regionale en lokale infrastructuur. Het IF bevat voor het hoofdwegenet 2,7 miljard euro en voor regionale en lokale infrastructuur e.d. ruim 328 miljoen euro.

Het IF wordt hoofdzakelijk gevoed uit de algemene middelen en uit het Fonds Economische Structuurversterking (FES). Het FES is ingesteld ten behoeve van de financiering van projecten die beogen de economische structuur te versterken. Dit fonds wordt beheerd door de ministeries van Economische Zaken en Financiën. De financiering van het FES vindt plaats door middel van een deel van de aardgasbaten en de rentevoordelen die voor het rijk ontstaan bij de verkoop van staatsdeelnemingen. De Interdepartementale Commissie voor de Ruimtelijke Economie (ICRE) adviseert over de verdeling van deze middelen.

Sinds de instelling van het FES (1994) is ongeveer 70% van de middelen besteed aan projecten op het terrein van verkeer en vervoer zoals de HSL-zuid, de Betuweroute en het Bereikbaarheidsoffensief Randstad (BOR). Anno 2007 zijn de middelen van het FES tot 2010 reeds geheel toegeedeeld aan projecten.

Dat de financieringsstructuur voor het hoofdwegenet zo ingewikkeld is wordt met name veroorzaakt doordat er sprake is van een aantal verschillende financieringsbronnen en een zeer groot aantal stakeholders. Vrijwel iedere stakeholder is op een of andere manier bij het proces betrokken en heeft zijn eigen methode van afweging, lobbyen, e.d.

### ***Meerjarenprogramma Infrastructuur, Ruimte en Transport (MIRT)***

De weginfrastructuur die het kabinet wil realiseren of aan de uitvoering waarvan al wordt gewerkt wordt geïnventariseerd en beschreven in het MIRT (tot 2008 MIT genoemd). Het bevat een overzicht van alle projecten die worden uitgevoerd in het kader van het mobiliteits- en waterbeleid. Het MIRT wordt aan de Tweede Kamer toegezonden als bijlage bij het Infrastructuurfonds. Dit projectenboek bevat niet alleen de projecten voor de aanleg van infrastructuur, maar ook de beheer- en onderhoudsprogramma's. Dit meerjarenprogramma bestaat uit twee delen. Een deel dat uit concrete projecten bestaat en dat – voor het MIT 2007 – loopt tot 2015. Het tweede deel voor de periode van 2015 tot 2020 geeft slechts een overzicht van potentiële knelpunten. Of deze knelpunten met behulp van infrastructuur zullen worden opgelost is nog maar de vraag.

Het MIRT zoals dat uiteindelijk tot stand is gekomen wordt vervolgens in een bestuurlijk overleg tussen de minister van Verkeer en Waterstaat en de belanghebbende decentrale partijen besproken. Dit bestuurlijk overleg vindt plaats voordat het MIRT in de Tweede Kamer wordt behandeld. De veranderingen die op deze manier in het projectenboek worden aangebracht ontvangt de Kamer dan per brief.

De uitbreiding van het MIT tot het MIRT is tot stand gekomen in het Coalitieakkoord 2007. In het MIRT staat de samenhang tussen ruimtelijke projecten, infrastructuur en openbaar vervoer centraal.<sup>4</sup>

In de regio Eindhoven is men zeer te spreken over deze aanpak in het MIRT. Afgesproken is dat in 2008 een pilot-MIRT-verkenning Zuidoost Vleugel Brabantstad wordt opgenomen. In het kader hiervan is een integraal pakket maatregelen samengesteld dat onder andere betrekking heeft op de financiering van de mobiliteit, het mobiliteitsmanagement, het openbaar vervoer en de aanpassingsmaatregelen van de infrastructuur. Op lokaal niveau meent men dat deze MIRT-status een belofte inhoudt, maar zorgelijk wordt het gevonden dat er op rijksniveau niet meer departementen meedoen en de ambtelijke verkokering daar blijft bestaan.

### 3.3.2 LANGE TERMIJN PLANNING

Voor het bepalen van de toekomstige vraag naar infrastructuur is inzicht nodig in trendmatige ontwikkelingen die deze vraag bepalen. Dit inzicht in deze vraagbepalende factoren is echter nog verre van compleet.

Tijdens het beleidsdebat in de Eerste Kamer over de ruimtelijk-economische ontwikkelingen in Nederland werd de motie Lemstra aangenomen. Deze motie constateerde dat er in de grote nota's van de regering die over de ruimtelijke economie gaan, te weten de nota's *Ruimte, Pieken in de Delta, Mobiliteit* en de *Agenda Vitaal Platteland* een lange termijn visie ontbreekt en dat zelfs de planningshorizonten verschillen en dicht bij het heden liggen. Verder spreekt de motie uit dat deze nota's met betrekking tot een aantal problemen waaronder de bereikbaarheid van de Randstad, de toekomst van Schiphol en hoge waterstanden niet de geringste aanzet tot een aanpak hiervan tonen.

Wat de Eerste Kamer ook miste zijn de verbanden met de Kennisinfrastructuur en de toekomstige aanwending van de middelen uit het Fonds Economische Structuurversterking. Verder constateert de Kamer in deze motie dat er geen instrumenten beschikbaar zijn voor een objectieve afweging van maatschappelijke kosten en baten. De Kamer verzoekt de regering dan ook de langetermijninvesteringstrategieën aan de Staten-Generaal te doen toekomen en daarbij vooral rekening te houden met de zeer lange voorbereidingstijd van grote nationale investeringen. Ook verzoekt de Kamer om de ontwikkeling van een objectief en integraal beoordelingskader.<sup>5</sup>

De minister van VROM heeft daarop voor de uitvoering van deze motie het Ruimtelijk Planbureau (RPB) en het Milieu en Natuur Planbureau (MNP) gevraagd een verkenning te verrichten naar de ruimtelijke vraagstukken die zich tussen 2020 en 2040 zullen voordoen en waarvan de effecten en/of de oorzaken kunnen worden beïnvloed door het ruimtelijk beleid. In het rapport *De ruimtelijke vraagstukken van de toekomst voor de beleidsagenda van nu* geven het RPB en MNP op basis van de lange termijnszenario studie *Welvaart en leefomgeving* – een inven-

tarisatie van de trends en vraagstukken op ruimtelijk gebied die op lange termijn zullen spelen en al in de huidige kabinetsperiode aandacht verdienen (RPB, MNP 2007).

Met deze studie zijn de lange termijnvraagstukken echter nog lang niet allemaal even helder en is het evenmin zeker wat er beleidsmatig ondernomen moet worden. RPB en MNP benoemen nog een aantal onderwerpen die door middel van onderzoek in de bestaande kennislacunes kunnen voorzien:

- Ruimtelijk gedrag: verschillende maatschappelijke ontwikkelingen zullen tot nieuwe, nog onbekende ruimtelijke patronen leiden. Zoals vestigingsvoorkeuren en keuzen van vervoerswijze van burgers en ondernemers en de veranderende samenstelling van bevolking en economie. Nieuwe groepen als allochtonen en ouderen stellen andere eisen.
- Ander beleid: hoe zien de ruimtelijke opgaven eruit bij nieuwe beleidsdoelstellingen en alternatieve beleidsopties?
- Schoksgewijze veranderingen: wat zijn de blijvende ruimtelijke gevolgen van plotselinge en ingrijpende ontwikkelingen, zoals van een snelgroeiende populariteit van telewerken?
- Ruimtelijke verfijning: de huidige uitspraken zijn op grof ruimtelijk schaalniveau gedaan. Voor een aantal thema's is verdere ruimtelijke detaillering noodzakelijk, bijvoorbeeld bij investeringsprojecten.
- Gedrag bij krimp: in sommige regio's is al sprake van krimp. Er is weinig bekend over het ruimtelijk gedrag van burgers en ondernemers in een krimpende samenleving.
- Ruimtelijke segregatie: deze zal in grote steden niet verdwijnen. Wat is de relatie tussen ruimtelijke en sociale segregatie?
- Verstedelijking en water: op de lange termijn zal de spanning tussen waterdreiging en verstedelijking in het westen te groot worden. Hoe zullen private partijen op deze onveiligheid reageren?
- Randstadeconomie: wat zijn de toekomstige kansen en bedreigingen voor de economie van de Randstad?
- Planning bij onzekerheid: ruimtelijk beleid gaat gepaard met veel onzekerheid. Hoe kunnen grote risico's worden voorkomen? (RPB, MNP 2007: 35-36).

Deze analyse van de planbureaus maakt duidelijk dat er op het terrein van de langetermijnplanning van weginfrastructuur en de toekomstige behoefte hieraan nog een hoop werk valt te doen.

Dat het van groot belang is zorgvuldig onderzoek te verrichten naar de toekomstige effecten van infrastructurele maatregelen toont de case van de verbreding van de A4 bij Leiderdorp.

Het tracébesluit van de A4 bij Leiderdorp betreft de verbreding van 2×2 naar 2×3 rijstroken.

De rijksoverheid en de gemeente Leiderdorp hebben enkele onderzoeksbureaus de luchtkwaliteit laten onderzoeken voor het plangebied. In opdracht van Milieudefensie plaatst onderzoeksbureau Stichting Analyse en Verificatie Onderzoek Luchtkwaliteit (SAVOL) een aantal zeer kritische kanttekeningen bij de "volledig-

heid en juistheid” van de betreffende luchtkwaliteitrapporten (Stichting Analyse en Verificatie Onderzoek Luchtkwaliteit 2006). Volgens het onderzoek van SAVOL is alleen de verkeersaantrekkende werking van de wegverbreding in het eerste jaar van openstelling van de wegverbreding (2012) onderzocht en is er geen vergelijking gemaakt tussen de situatie met 2×2 rijstroken en 2×3 rijstroken. Echter in de periode van 2012 tot 2020 groeit het verkeer bij een verbrede weg met niet minder dan 34 tot 47%!

Bij de vaststelling van het tracébesluit is verder geen rekening gehouden met de toename van de luchtvervuiling buiten het plangebied. Over de A4 gaat veel doorgaand verkeer en de groei van dat doorgaande verkeer ten gevolge van de verbreding veroorzaakt derhalve ook elders meer luchtverontreiniging. Zeker ook in stedelijke gebieden buiten het bestudeerde gebied, zoals in Leiden. In Leiderdorp vinden verscheidene ingrijpende ontwikkelingen plaats die in verband kunnen worden gebracht met de plannen rond de verbreding van de A4. De gemeente heeft zich in de zogenaamde W4-overeenkomst verplicht ruim 18 miljoen euro bij te dragen aan de meerkosten van de inpassing. Om deze bijdrage te kunnen financieren is in het kader van het W4-akkoord onder andere een uitbreiding van de bestaande meubelboulevard gerealiseerd en wordt een aanzienlijke uitbreiding van het aantal vierkante meter kantoorvloeroppervlak mogelijk gemaakt. Ook de bouw van een Brede School – die overigens niet tot de genoemde overeenkomst wordt gerekend – moet bijdragen aan de financiële dekking. Tot deze plannen behoort verder een vestiging van Ikea met 850 parkeerplaatsen en de uitbreiding van een reeds bestaand winkelcentrum met circa 600 parkeerplaatsen. De verkeersaantrekkende werking en de negatieve gevolgen voor de luchtkwaliteit van deze plannen zijn volgens SAVOL evenmin in de analyses betrokken.

In de rechtszaak die Milieudefensie had aangespannen in deze kwestie vernietigde de Raad van State uiteindelijk onder andere op grond van de door SAVOL genoemde argumenten dit tracébesluit (Raad van State 2007). De raad oordeelde dat het besluit van het rijk de A4 bij Leiden te verbreden niet zorgvuldig en op ondeugdelijke motieven was genomen.

### 3.3.3 HET OMGAAN MET INFORMATIE

De Parlementaire Enquêtecommissie Bouwnijverheid stelt in haar eindrapport met verbazing, “zo niet verbijstering” kennis genomen te hebben van de soms laconieke en doorgaans passieve wijze waarop personen op de hoogste posities in het betrokken bedrijfsleven en in het landsbestuur met onregelmatigheden zijn omgegaan. Het valt niet met zekerheid te zeggen wat de omvang is van de benadeling van burgers en overheid, maar vermoed wordt dat de kartelafspraken een prijsverhogend effect van tien procent hebben gehad.

Wat de commissie op het punt van de integriteit vooral zorgen baart is de cultuur van smeren en fêteren (Parlementaire Commissie Infrastructuurprojecten 2002: 261). Hoewel de “onderste steen niet is boven gekomen”, wordt toch geconsta-

teerd dat de onregelmatigheden een structureel karakter dragen. Ingeval een overheidsdienst een belangrijke opdrachtgever voor aannemers is, dient naar het oordeel van de commissie het bijpassende relatiebeheer “sober en zakelijk” te zijn. Deze laatstgenoemde Parlementaire Onderzoekscommissie concludeert in dit verband onder andere dat door de jaren heen de Tweede Kamer steeds buiten spel stond en ambtenaren in onderonsjes miljarden verdeelden. Tweede Kamerleden werden met voldongen feiten geconfronteerd en namen genoegen met gebrekkige informatie. Bovendien werd de Tweede Kamer stelselmatig niet juist en niet volledig geïnformeerd en werden kritische rapporten en alternatieven bewust achter gehouden.<sup>6</sup>

Tanis meent dan ook dat: “tien tot twintig jaar bouwfraude en corruptie tot de conclusie leidt dat overheden kreukbaar zijn en over weinig zelfreinigend vermogen beschikken” (2005: 54, 62).

Het veranderen van de cultuur en de omgangsvormen in een bepaalde branche is geen gemakkelijke opgave en dat lukt zeker niet van de ene op de andere dag. Volgens Tanis is het daarom verstandig er rekening mee te houden dat een deel van de fraude en corruptie ondergronds is gegaan (2005: 63).

Ook de Algemene Rekenkamer heeft in enkele rapporten aandacht gevraagd voor de wijze waarop bij de planning van infrastructuur met informatie wordt omgegaan. Deze rapporten waren voor de Tweede Kamer mede de aanleiding voor het houden van het Parlementaire Onderzoek Infrastructuurprojecten. In haar rapport van 2001 heeft de Algemene Rekenkamer vooral aandacht geschonken aan de kwaliteit van de beleidsinformatie die ten grondslag heeft gelegen aan de besluitvorming met betrekking tot de aanleg van de Betuweroute. Zo is gekeken naar de prognoses van de groei van het goederenvervoer, alternatieven en de informatie over de milieuaspecten (Algemene Rekenkamer 2001). In verband met de wens van het kabinet de Betuweroute voor een deel privaat te financieren constateerde de Algemene Rekenkamer dat ook de analyses aangaande de deelname van private middelen niet op de juiste informatie waren gebaseerd. Dat verklaarde dan ook waarom er geen private financiers zijn gevonden.

### 3.3.4 FRAGMENTATIE IN DE BESLUITVORMING

Bij aanleg- of verbeteringsprojecten van infrastructuur is er vaak sprake van een groot aantal partijen die ieder hun eigen belangen najagen en hun doelen proberen te realiseren. Hierdoor kan de situatie ontstaan dat er verschillende plannen voor een gebied worden ontwikkeld die alle op de een of ander manier van invloed zijn op de ruimtelijke indeling of andere aspecten van het betrokken gebied.

In het rapport *Willen en wegen* van de provincie Zuid-Holland wordt in dit verband gesproken van bestuurlijke differentiatie (Provincie Zuid-Holland 2005). De coördinatie tussen de verschillende overheidsniveaus laat vaak veel te wensen over. De rijksoverheid heeft wel duidelijke procedures die redelijk toegankelijk zijn, maar daar staat tegenover dat die bij de andere overheden vaak ontbreken.

Vooral op lokaal niveau leidt dat tot spanningen en fricties. Volgens genoemd rapport is dit een belangrijke oorzaak van tal van vertragingen bij de aanleg en het onderhoud van wegen (Provincie Zuid-Holland 2005).

De gemeenten, die veel macht bezitten in dit proces omdat zij de bestemmingsplannen moeten vaststellen, blijken vaak in de loop van het gehele proces nogal wispelturig door regelmatig van wensen en verlangens te veranderen of niet te weten wat ze willen. Zo kan bijvoorbeeld de aanwezigheid van een eendenkooi oorzaak zijn van jarenlang vertragen van een project.<sup>7</sup> Hierdoor kunnen de maatschappelijke kosten van deze vertragingen het maatschappelijk belang van behoud van de kooi vele malen overtreffen.

Naast de verschillende procedures op de bestuurlijke niveaus zijn er ook verschillen in cultuur. Zo beklagden sommigen zich tijdens de genoemde hoorzittingen erover dat op rijksniveau vaak de cultuur heerst van doordrammen. In geval het rijk het benodigde geld beschikbaar heeft kan het andere instanties ertoe dwingen binnen een beperkte tijd met alternatieven te komen. Doen zij dat niet, dan wordt het project, volgens de op het centrale niveau gewenste plannen, uitgevoerd.<sup>8</sup> Op het provinciale niveau gaat het meestal om het bij elkaar houden van de partijen en lokale overheden streven er meer naar met de belangen van de burgers rekening te houden. Vooral ook de belangentegenstellingen op lokaal niveau zijn nogal eens een belangrijke vertragende factor.

Wat de rol van het middenbestuur betreft – de provincie – heeft deze vooral bij belangenconflicten tussen gemeenten een taak. Het komt echter nogal eens voor dat de provincie zich heel terughoudend en volgend opstelt.

Deze fragmentatie blijft niet beperkt tot het bestuurlijk niveau. Deze treedt op veel ruimere schaal op en om die reden beschouwt Van Bochove dan ook in totaal vier vormen van fragmentatie. Naast de reeds genoemde bestuurlijke fragmentatie onderscheidt deze onderzoeker gefragmenteerde besluitvorming en ruimtelijke en inhoudelijke fragmentatie. Bij gefragmenteerde besluitvorming is er sprake van verschillende besluitvormingstrajecten met elk verschillende tijdlijnen en besluitvormingsronden. Deze uiteenlopende processen vinden vaak gelijktijdig plaats. Ruimtelijke fragmentatie heeft betrekking op het verschijnsel dat projecten nog al eens eigen ruimtelijke projectgrenzen hebben. En ten slotte verwijst inhoudelijke fragmentatie slechts naar een beperkt aantal aspecten binnen een project. Wat de inhoudelijke verschillen betreft kan het in een bepaald gebied gaan om de herstructurering van stadswijken, de bouw van vinx-locaties, de aanleg van een spoorlijn, de verbreding van weginfrastructuur en de aanleg van bedrijventerreinen of een natuurgebied (Van Bochove 2006: 14, 43, 44).

Oorzaken van fragmentatie zijn volgens deze studie onder andere de uiteenlopende begrenzingen van de projecten, de vele actoren met wisselende belangen, te weinig probleemeigenaren en het ontbreken van een visie op het gebied. Om de fragmentatie te doorbreken moeten er koppelingen tot stand worden gebracht tus-

sen de projecten. Zo constateert deze onderzoeker dat bij het rijk met betrekking tot de A15-zone de wil ontbrak om verbindingen met andere projecten tot stand te brengen. De centrale overheid was er vooral op uit het project van de wegverbreding van de A15 te begrenzen vanwege de angst haar eigen belangen te schaden. Zo wordt het ontwikkelen van een meer integrale visie op de A15-zone bemoeilijkt en de kans gemist de verbreding van de weg als motor te laten werken voor de verdere ontwikkeling van het gebied. De nationale overheid blijkt een belemmerende actor bij het leggen van koppelingen (Van Bochove 2006: 88, 94, 96).

Van Bochove bepleit het creëren van een sense of urgency, hetgeen ervoor kan zorgen dat een gebied meer als een totale ontwikkelingszone wordt beschouwd. Ook een nieuw soort gebiedsautoriteit die meervoudig ruimtegebruik kan stimuleren is daarbij een mogelijkheid. Als derde oplossing stelt hij voor door middel van kennismanagement gezamenlijk kennis te ontwikkelen en uitgangspunten te formuleren (community of practice).

### 3-3-5 HET GEBRUIK VAN MAATSCHAPPELIJKE KOSTEN-BATENANALYSE (MKBA)

Een MKBA beoogt ex-ante inzicht te verschaffen in de bijdrage van een project of maatregel aan de maatschappelijke welvaart en in de verdeling van de kosten en baten over de betrokkenen. De methodiek van MKBA is afkomstig uit de economische welvaartstheorie waar de welvaart gemeten wordt aan de hand van het zogenaamde consumenten- en producentensurplus.

Om de MKBA in het verkeers- en vervoersbeleid operationeel te maken worden deze surplussen benaderd door reistijdvoordelen te monetariseren. Dit is een vergaande versimpeling die lang niet altijd wordt onderkend, maar wel inhoudt dat de waardering van een paar minuten reistijdwinst die een reiziger van een verbetering van infrastructuur ondervindt, als baten voor de maatschappelijke welvaart worden genomen. Dit is gebaseerd op de economische redenering dat tijd en ruimte schaarse goederen zijn en bijdragen aan de welvaart. Deze redenering staat los van wat de consument met deze reistijdwinst doet: hij kan deze extra verkregen tijd aanwenden voor meer productieve arbeid of voor de tv gaan zitten. Daarmee is het dus niet uitgesloten dat, als de rijksoverheid het project kiest met de meeste reistijdwinst, het improductieve vrije tijd subsidieert (tv kijken).

In 2000 is de leidraad voor het opstellen van MKBA's van grote rijksprojecten (Overzicht Effecten Infrastructuur, OEI) tot stand gekomen. Opzet van een OEI is alle kosten van aanleg en onderhoud en de effecten van infrastructuur op de bereikbaarheid, economie, veiligheid, natuur en milieu weer te geven en de betekenis daarvan voor de welvaart te analyseren.

De OEI-leidraad voor het maken van MKBA's is een dik boekwerk dat allerlei theoretische beschouwingen bevat, een stappenplan en overzichten van de effecten die meegenomen moeten worden. Een duidelijke definitie van een MKBA ontbreekt echter. Onduidelijk is wat de leidraad nu precies beoogt. Het bevat

geen concrete kengetallen, sleutels of iets dergelijks. Daar moeten de opstellers van een MKBA zelf voor zorgen.

Goederenvervoer zit met betrekking tot reistijdwaardering zwak in de methodologie. Voor personenvervoer wordt de reistijd gewaardeerd op basis van het zogenaamde consumentensurplus (dit is de perceptie van personenvervoer), terwijl de waardering van het goederenvervoer gebaseerd is op de gemiddelde loonkosten van de chauffeur. Deze loonkosten komen meestal veel lager uit.

### ***Innovatieve projecten***

Het meten van kosten en baten van innovatieve projecten kent een aantal complicerende factoren. Doorgaans is het wel mogelijk de kosten daarvan in beeld te brengen, maar de baten zullen zich pas op de lange termijn voordoen. Een groot deel van deze baten manifesteert zich vaak na de periode waarop een kosten-batenanalyse betrekking heeft (30 jaar). Voor innovatieve projecten is het gebruik van een MKBA dikwijls ongeschikt, omdat de baten daarvan niet of nauwelijks in beeld zijn te brengen. Zo wordt bijvoorbeeld wel eens de tamelijk willekeurige vuistregel gehanteerd dat, ingeval van een innovatief project tien exemplaren in het buitenland kunnen worden verkocht, dat dan de kosten-batenverhouding gelijk is aan één. Hier is het gebruik van een risicomodel meer gerechtvaardigd. In een risicomodel is de redenering: willen wij het risico lopen dat bijvoorbeeld de investering van 1 miljard euro in een innovatief project mislukt?

### ***Discontovoet***

De richtlijn van het ministerie van Financiën schreef lange tijd een discontovoet in MKBA's voor van 4%. Soms gebeurt het echter dat voor bepaalde projecten vanwege de grote onzekerheid een hogere discontovoet van bijvoorbeeld 8 of 9% moet worden gebruikt. Om met onzekerheid om te gaan zijn ook andere methoden bruikbaar, zoals scenario's. Een gelijke behandeling van infrastructuur is hier gewenst.

### ***Tijdshorizon***

OEI schrijft voor een tijdshorizon van 30 jaar te hanteren in MKBA's. Voor infrastructuurprojecten is deze horizon vaak relatief te kort. Veel van de baten van infrastructuur ontstaan pas op de langere termijn.

### ***Lijn- versus puntinfrastructuur***

Bij puntinfrastructuur doen zich weinig of geen reistijdwinsten voor (bijv. wel ingeval goederen sneller kunnen worden overgeladen). Bij dergelijke infrastructuur schiet OEI dus tekort. OEI moet voor puntinfrastructuur duidelijker aangeven welke effecten wel en welke niet relevant zijn. Puntinfrastructuurprojecten betreffen zeehavens, luchthavens en stationsgebouwen.

### ***Verkeersveiligheid***

In Nederland zijn nog nauwelijks MKBA's op verkeersveiligheidsmaatregelen toegepast, aldus Wijnen. In Europees verband komt dit veel vaker voor. Wel is er

een leidraad ontwikkeld voor MKBA's van verkeersveiligheidsmaatregelen (Wijnen 2005).

### 3.3.6 INDIRECTE EFFECTEN

In de OEI-leidraad worden de effecten onderscheiden in directe en indirecte effecten. Volgens OEI moeten alle voor de besluitvorming van belang zijnde effecten aan de orde komen. De effecten voor de werkgelegenheid blijven echter in het kader van een MKBA buiten beschouwing. Zoals werd geconstateerd zijn deze werkgelegenheidseffecten op lokaal en regionaal niveau juist van groot belang. Het is interessant hier op te merken dat in de officiële Duitse evaluatiemethodiek van infrastructuurprojecten nadrukkelijk aandacht wordt geschonken aan de werkgelegenheidseffecten (Van de Vooren 2001: 8). Het gebruik van deze methodiek is in Duitsland verplicht en in tegenstelling tot OEI worden hierin wel concrete kengetallen gepresenteerd. Hoewel overigens bij deze methodiek vanuit de economische theorie kritische kanttekeningen kunnen worden gemaakt, beschikken alle betrokkenen in het infrastructuurproject wel over hetzelfde referentiekader.<sup>9</sup> Dat heeft onmiskenbaar gunstige gevolgen voor een snellere voorbereidingstijd van de projecten, een sterker draagvlak en het bereiken van overeenstemming.

Directe effecten (inclusief de directe externe effecten) worden gedefinieerd als zijnde de effecten die direct samenhangen met de aanleg, de aanwezigheid en het gebruik van een infrastructuurproject. Indirecte effecten zijn de gevolgen die niet rechtstreeks met het project samenhangen, maar voortvloeien uit de directe effecten van het betreffende project.

#### Box 3.1 Samenwerkingsverband Noord-Nederland: Energy Valley

In Noord-Nederland zijn sterke economische ontwikkelingen aan de gang. De energiesector maakt daar met ICT-activiteiten en ontwikkelingen in het onderwijs een flinke groei door. Deze ontwikkelingen gecombineerd met de beschikbare ruimte en een uitstekend leefklimaat creëren een sterk groeipotentieel. Energy Valley is een publiek-privaat samenwerkingsverband om de energieactiviteiten in Noord-Nederland uit te laten groeien tot een cluster van nationale en internationale betekenis. Noord-Nederland kan een centrale positie innemen als Europees kenniscentrum voor duurzame energiedragers en energiebusiness. Doel is de economie en werkgelegenheid van Noord-Nederland te versterken door de energieactiviteiten optimaal te benutten. Het noorden beschikt van nature over de voorwaarden die Energy Valley een solide basis kunnen geven: een groot aantal activiteiten omtrent aardolie en gas alsmede alternatieve vormen van energie.

Energy Valley is gebaseerd op drie pijlers:

- energietransitie,
- kennis en innovatie,
- conventionele energieactiviteiten.

Volgens het masterplan 'Een vallei met uitzicht' is het doel om op basis van bestaande sterkten een mondiale sleutelpositie op te bouwen. Noord-Nederland speelt een sterk stimulerende rol bij dit transitieproces van geheel Nederland en zelfs daarbuiten. Door krachtige investeringen in kennisontwikkeling en de ontwikkeling van bedrijvigheid kan de werkgelegenheid worden veiliggesteld voor de periode die aanbreekt na de uitputting van de Nederlandse gasvelden. Uit onderzoek blijkt dat Noord-Nederland een centrale positie kan innemen als Europees kennis-centrum.

Bron: [www.energyvalley.nl](http://www.energyvalley.nl)

De indirecte effecten moeten de doorwerking van de markttransacties van eigenaar, exploitant en gebruikers van projectdiensten voorstellen op andere markten dan de transportmarkt (Ministerie van Verkeer en Waterstaat en Ministerie van Economische Zaken 2004).

Bij deze omschrijving van het begrip 'indirecte effecten' is een aantal kanttekeningen te maken. Deze omschrijving heeft geen betrekking op de ontwikkeling van een locatie of regio ten gevolge van activiteiten die op meerdere terreinen gezamenlijk worden ondernomen.

Deze groei-effecten ontstaan door investeringen in zowel infrastructuur maar ook door onderwijs, stedelijke vernieuwing en technische innovatie. Deze effecten worden wel omschreven als agglomeratie-effecten:

"Agglomeration economies arise from the geographical association of a large number of economic activities. These may not be in the same industry. They arise because of the centration of many facilities jointly serving different industries. These include urban transportation and commuting facilities; well-organised labour markets and large pools of workers with different types of skill; the provision of social overheads and government services; and a vast range of legal and commercial services. Urban centres also offer attractions to marketoriented activities. Social and cultural activities may have a strong effect on the location decisions of entrepreneurs, industrial managers and migrant households" (Armstrong 1992: 90).

Agglomeratie- en clustereffecten krijgen op regionaal-economisch niveau steeds meer belangstelling. Door de nabijheid in agglomeratieverband van economische activiteiten kunnen in steden en stedelijke gebieden positieve ontwikkelingseffecten ontstaan. Hetzelfde is het geval met clusters van economische activiteiten: de aanwezigheid daarvan trekt soortgelijke bedrijven aan. Vooral de aanwezigheid van verscheidene activiteiten kunnen elkaar stimuleren en krachtige economische groei op gang brengen. In de twee kaders zijn voorbeelden gegeven van regio's waar sprake is van een dergelijke gezamenlijke aanpak op meerdere gebieden. Deze ontwikkelingen maken enthousiasme los, stimuleren elkaar en doen een sfeer ontstaan waarin de deelnemers vanuit een onderlinge betrokkenheid zich sterk inzetten voor het betreffende gebied. Het totale effect van deze inspanningen is groter dan de som der delen.

**Box 3.2**      **Transportcentrum Venlo**

Venlo is na de mainports Rotterdam en Schiphol het derde logistieke knooppunt van Nederland door de aanwezigheid van een krachtig internationaal logistiek en industrieel netwerkcomplex. In Venlo komen snelwegen, spoorlijnen en waterwegen bijeen. De vliegvelden in een straal van 100 km rondom de stad vormen daarop een belangrijke aanvulling. Door de ligging aan de A-67/BAB-40 en BAB-61 is Venlo via de weg verzekerd van een goede bereikbaarheid. Multimodaliteit staat voorop waar het gaat om het faciliteren van de logistieke sector. Dit betekent dat het goederenvervoer over water en spoor wordt gestimuleerd en gefaciliteerd en dat gezorgd wordt voor efficiënte overslagpunten. Aan de Maas komt een container binnenvaartterminal en op lange termijn wordt een nieuwe container spoorterminal op het industrieterrein Trade Port ontwikkeld. Verder worden de mogelijkheden uitgebreid voor bedrijven met toegevoegde waarde activiteiten (Value Added Logistic). Maar Venlo heeft meer dan logistiek. Als grensstad heeft Venlo interessante mogelijkheden om op technologisch niveau samen te werken met Duitse topinstituten.

De ligging ten opzichte van de Randstad en het Ruhrgebied schept kansen om de culturele mogelijkheden (Maaspoort, Steyl, musea) beter te benutten. Ook de ontwikkeling van de toeristische sector is kansrijk vanwege het gegeven dat de Venlose bevolking bekend staat als sympathiek, dienstbaar en positief. Dit kan bijdragen aan een kwaliteitsslag in de binnenstad.

De aanleg van de noord-zuidverbinding (A73-74) is van groot economisch belang. De grootste kans ligt in het zo aantrekkelijk mogelijk maken van de stad in het algemeen en meer specifiek zijn er kansen op de gebieden van toerisme, recreatie, natuur, detailhandel en onderwijs.

Bron: Meerjaren Ontwikkelingsplan Grote Stedenbeleid 2005-2009.

Deze agglomeratie-effecten komen in feite overeen met de effecten waar Van Bochove over spreekt als hij het heeft over een integrale benadering van herstructurering van stadswijken, de aanleg van bedrijventerreinen of een natuurgebied en de aanleg van infrastructuur (Van Bochove 2006). Een gezamenlijke aanpak van projecten kan (mede) in een stad of regio een cultuuromslag teweegbrengen die enthousiasme en energieke ontwikkelingen stimuleert. Infrastructuur alleen zou dit niet kunnen realiseren; zonder infrastructuur gaat het evenmin. Dit gezamenlijke resultaat dient in ogenschouw te worden genomen. In de kaders zijn enkele voorbeelden gegeven.

Dat de groeipotentie in Noord-Nederland aanwezig is blijkt bijvoorbeeld wel uit het feit dat de economie in 2006 in deze regio twee keer zo snel groeide als in de rest van Nederland.

Deze activiteiten spelen zich ook internationaal af en door verbeterde transportmogelijkheden is een geheel nieuwe dimensie aan de noordelijke gasindustrie toegevoegd. Door een uitbreiding van het vliegverkeer via vliegveld Eelde naar het Noorse Stavanger en het Schotse Aberdeen – steden die ook beschikken over een sterke energiesector – is “een ‘gouden driehoek’ in de olie- en gasindustrie ontstaan”.<sup>10</sup>

Goede infrastructuur is een essentiële voorwaarde voor economische groei. Stern en Aschauer pleiten er daarom voor overheidskapitaal, en dan in het bijzonder

infrastructuur, als een productiefactor te beschouwen. Naast de traditionele factoren die de groei bepalen, namelijk kapitaal, de menselijke productiefactor en technologie, is in hun visie overheidskapitaal medebepalend voor economische groei (Stern 1991). Aschauer toont aan dat een stijging van de overheidsinvesteringen in de Verenigde Staten een positief effect heeft op de productie van de particuliere sector met een factor vier tot zeven (Aschauer 1989). Overheidsinvesteringen worden zo wel gezien als een onbetaalde productiefactor voor bedrijven. Toen-Gout en Jongeling (1993) hebben deze relatie voor Nederland empirisch onderzocht. Zij constateren dat in Nederland investeringen in infrastructuur door de overheid eveneens een significant positieve invloed hebben op de ontwikkeling van de particuliere productie.

In verkeersanalyses van transport is de gebruikelijke aanpak allereerst uitspraken te doen over de economische ontwikkeling waarna daarvan de gevolgen voor de mobiliteit worden afgeleid. Het nadeel van deze werkwijze is dat een terugkoppeling van mobiliteit naar economie niet mogelijk is. Daardoor bieden deze analyses geen inzicht in de mate waarin een verbetering van de infrastructuur en andere vormen van verkeers- en vervoersbeleid de economische ontwikkeling bevorderen. Dit kan wel met het door Van de Vooren ontwikkelde model MOBILEC. De hier genoemde integrale effecten die moeten worden meegenomen bij de vaststelling van de economische betekenis van infrastructuur kunnen met dit model worden geanalyseerd.

In MOBILEC is de verkeersinfrastructuur te onderscheiden naast de gebruikelijke productiefactoren arbeid en kapitaal. Goederenvervoer en zakelijk (personen) verkeer zijn in dit model onderscheiden. Met behulp van productiefuncties, die het verband leggen tussen het regionale product enerzijds en de productiefactoren arbeid, kapitaal en infrastructuur anderzijds, kan zodoende worden nagegaan in hoeverre verbetering van bestaande infrastructuur en de aanleg van nieuwe infrastructuur bijdragen aan de economische groei en de werkgelegenheid van de eigen en van andere regio's (Van de Vooren 2004).

Het economisch beleid van de rijksoverheid is in belangrijke mate gericht op de bevordering van de werkgelegenheid en stimulering van de economische groei. Overheidsinvesteringen, waaronder die voor transport en infrastructuur, worden om die reden dan ook steeds vaker gewogen op hun bijdrage aan groei en werkgelegenheid. Zoals reeds eerder opgemerkt zijn dit ook op regionaal (en lokaal) niveau belangrijke aandachtspunten. Het economisch model MOBILEC biedt de mogelijkheid vooral ook op regionaal niveau deze effecten te berekenen.

### **3.3-7 INTERDEPARTEMENTALE COMMISSIE VOOR DE RUIMTELIJKE ECONOMIE (ICRE)**

De Interdepartementale Commissie voor de Economische Structuur (ICES, later de ICRE) is in de jaren tachtig van de vorige eeuw ingesteld om het kabinet te adviseren over het te voeren economische structuurbeleid. Dit gebeurde in het

kader van het beleid om de publieke investeringen te stimuleren met het oog op bevordering van de economische groei (zie pagina 14). In de loop der jaren is het aantal betrokken departementen uitgebreid en anno 2007 omvat het economisch structuurbeleid beleidsterreinen als bereikbaarheid, ruimtelijke inrichting, bedrijventerreinen, grotestedenbeleid, natuurbeheer, milieu, dienstverlening overheid en onderwijs en kennis. De ICRE richt zich met name op het ruimtelijk economisch beleid en op majeure projecten, dat wil zeggen projecten van nationale betekenis voor de economische structuur. Recent worden ook – in geval dat nodig is – de regio's op ad-hoc basis betrokken bij de activiteiten van de ICRE. De planbureaus adviseren de ICRE regelmatig over de projecten en met name het CPB publiceert deze adviezen.

Opvallend is dat het ICES/ICRE-proces nogal eens onder grote tijdsdruk staat waardoor het onderzoek met betrekking tot de vraag of de ingediende projecten voor de betreffende gelden in aanmerking kunnen komen vaak een quick scan karakter heeft. Ook is het geen uitzondering dat de voorgestelde maatregelen uiteenlopen wat betreft de mate van concreetheid en de mogelijkheden tot operationalisatie. Het CPB moet in die situaties volstaan met een marginale toetsing. Dat roept natuurlijk de vraag op of dat geen bias betekent ten gunste van maatregelen die zich beter laten kwantificeren dan andere, maar het CPB stelt de lezers wat dat betreft gerust door erop te wijzen dat zij “tracht om de kwantitatieve en kwalitatieve aspecten evenwichtig in de beschouwing te betrekken”. Een en ander laat onverlet dat het in alle gevallen gaat om een globale beoordeling van maatregelen en niet om een beoordeling van beleidsdoelen. “De beleidsdoelstellingen staan zelf niet ter discussie” (CPB 1998: I). Ook vindt er een marginale toetsing plaats op de legitimiteit: het bestaan van marktfalen als rechtvaardiging van overheidsingrijpen.

In het ICRE-proces wordt niet ingegaan op de vraag waarom betreffende projecten zijn opgenomen in de projectenlijst ten behoeve van versterking van de ruimtelijk-economische structuur. Evenmin komt in deze procedure de vraag ter sprake waarom de ingediende projecten niet binnen de departementale begrotingen kunnen worden uitgevoerd. Mocht dat wel het geval zijn, dan zou honorering van het ICRE-verzoek het project slechts in de tijd naar voren halen (CPB 1998: III).

Volgens een aantal evaluaties zijn de resultaten van de partiële toetsing van de maatregelen van matige kwaliteit en zijn de effecten op de beleidsdoelen vrij klein. Zo zijn de effecten van bijvoorbeeld de uitvoering van het volledige ICES-pakket in 1998 ter grootte van 65 miljard gulden zo beperkt dat de realisatie van veel beleidsdoelen (nog) niet in beeld komen. De voorgedragen maatregelen hebben nauwelijks effect op de uitstoot van schadelijke stoffen, hebben tegengestelde effecten op natuur en landschap en geen betekenis voor de modal-split. De beoogde maatregelen ter verbetering van de bereikbaarheid zullen maar beperkt effect hebben op de filezwaarte door de aanzuigende werking van nieuwe infrastructuur (CPB 1998: XI).

Een oorzaak van het geringe effect van de ICES-maatregelen op beleidsdoelen is dat de maatregelen alleen betrekking hebben op overheidsinvesteringen en subsidiemaatregelen, en deze hebben voor een aantal doelstellingen maar een beperkte werkingssfeer. In dergelijke situaties zijn de ICES-maatregelen vaak niet meer dan flankerend beleid. CPB, SCP en andere planbureaus constateren dan ook dat er aanzienlijke verbeteringen in de samenhang van de voorgestelde maatregelen mogelijk zijn. Zorgelijk achten zij het dat er een gebrek aan samenhang is tussen maatregelen voor ruimtedruk, grote stedenbeleid en bereikbaarheid (CPB 1998: XII).

Op grond van deze kritiek trekt het CPB uit de quick scans dan ook de conclusie dat het algemene beeld van de kwaliteit van de ingediende maatregelen niet erg gunstig is (CPB 1998: 187).

Het proces zou in de toekomst volgens het CPB kunnen worden versterkt door van meet af aan oplossingsrichtingen centraal te stellen die sterk aangrijpen bij de aard van de knelpunten, verschillende alternatieven te beschouwen en na een kritische voorselectie de meest kansrijke projecten aan een meer gedegen projectanalyse te onderwerpen. Het CPB acht het nuttig “standards and procedures” te ontwikkelen die bij alle belangrijke investeringsvoorstellen in acht moeten worden genomen. Dat kan de kwaliteit van de investeringsstrategie verhogen (CPB 1998: 187). Echter, sedertdien is niets meer van dergelijke voorstellen vernomen.

Integendeel. In latere publicaties is de afwegingsmethodiek er alleen maar ingewikkelder op geworden. Ondanks de toepassing van de kwantitatieve OEI-methodiek op de investeringen die in het kader van de MIRT worden verstrekt is de gebruikte methodiek voor de ICRE nog sterk kwalitatief van aard. In recente publicaties worden de projecten beoordeeld aan de hand van criteria met betrekking tot legitimiteit en subsidiariteit (ligt overheidsingrijpen in de rede?) en effectiviteit en efficiëntie. Aan beleidsalternatieven wordt in bescheiden mate aandacht besteed. Bovendien kan het CPB vaak niet goed vaststellen of het voorgestelde project andere activiteiten doubleert. Het CPB deelt de projecten in in drie categorieën: projecten met een gunstig, een gemengd en een ongunstig totaalbeeld. De gunstig beoordeelde projecten lijken dan aldus het CPB: “kansrijk om een positief maatschappelijk rendement op te leveren” (2007).

Van de in behandeling genomen verzoeken is in een aantal gevallen nog geen sprake van concreet ingevulde projectvoorstellen en worden er door de departementen soms generieke verhogingen van het budget gevraagd (CPB 2004). In weer een andere publicatie constateert het CPB dat er bij veel projecten sprake is van een gebrek aan zicht op de effecten van de voorstellen. In de meeste gevallen – aldus het CPB – zijn al veel initiatieven in het verleden ontplooid, maar bestaat er nog geen inzicht in de resultaten van die eerdere initiatieven. Hierdoor is ook veelal niet te achterhalen of de projecten uit meerdere publieke bronnen worden gefinancierd. Verder valt het het CPB op dat bij een aantal projecten sprake is van bovenmatige dimensionering, in de zin dat wordt ingezet op maximale omvang en maximale snelheid. Ook leveren belanghebbende instituten en bedrijven nogal eens zelf een te geringe bijdrage aan de projecten, ook al ontvangen zij

belangrijke baten. Een volgend aandachtspunt is een gebrek aan selectiviteit bij de projectvoorstellen hetgeen verbeterd kan worden door het opstellen van heldere criteria op basis waarvan een selectie kan worden gemaakt (CPB 2005: 9, 10).

### 3.3.8 INTERDEPARTEMENTAAL BELEIDSONDERZOEK (IBO)

Jaarlijks stelt het kabinet een aantal onderzoeksopdrachten vast die door interdepartementale werkgroepen worden uitgevoerd. Deze interdepartementale beleidsonderzoeken (IBO's) onderscheiden zich van andere vormen van onderzoek door de ontokerde aanpak waarbij kennis en ervaring binnen en buiten de ministeries worden benut.

Het ontwikkelen van alternatieven voor bestaand beleid en het politieke oordeel worden los gekoppeld van de beleidsopties. Vanwege de sterk stijgende kosten van infrastructuur is er een IBO uitgevoerd naar de vraag hoe de besluitvorming over onderhoud van infrastructuur beter onderbouwd kan worden, zodat tot een goede prioriteitstelling kan worden gekomen en de onderhoudsgelden zo doelmatig mogelijk worden aangewend. Hoewel bij de aanleg van infrastructuur de projecten geselecteerd worden op basis van maatschappelijke kosten-batenanalyses is dat bij onderhoud niet het geval. In het verleden behoorde het onderhoud tot het domein van technici; tegenwoordig is er steeds meer belangstelling voor een economische benadering van het onderhoudsvraagstuk waarbij het nut voor de gebruiker centraal staat.

De werkgroep doet in haar rapport een aantal aanbevelingen ter vergroting van de doelmatigheid van het onderhoud van infrastructuur.

Allereerst dient daartoe op macroniveau meer aandacht te worden besteed aan de prioritering van het onderhoud van zowel weg-, spoor- als vaarwegen. De begrotingsstukken voor de Tweede Kamer zouden informatie moeten bevatten over de analyse van de kosten van beheer en onderhoud en een vergelijking daarvan tussen de modaliteiten. Vervolgens zouden er meer differentiatiemogelijkheden moeten zijn om beleidskeuzes te kunnen maken en zouden bij het onderzoek naar de aanleg van infrastructuur ook alternatieven moeten worden onderzocht met verschillende onderhoudsstrategieën. Wat dit laatste betreft dient ook de relatie tussen de MIRT-besluitvorming en de middelen voor onderhoud op de begroting te worden versterkt. Ten slotte doet de werkgroep ook enkele voorstellen om bij de aansturing van de infrastructuurbeheerders – RWS voor weginfrastructuur en ProRail voor spoorinfrastructuur – de prioritering te betrekken. De beide beheerders van genoemde infrastructuur zien zelf ook de noodzaak meer economie in hun afwegingen te betrekken en meer kennis op te bouwen over de relatie tussen gebruiksintensiteit en onderhoudskosten (Interdepartementaal Beleidsonderzoek 2005).

In zijn reactie op dit rapport stelt het kabinet dat de aanbevelingen allemaal zaken betreffen die – overigens sinds kort – in meer of mindere mate reeds worden toegepast. Er zijn stappen gezet om van een “technische ingenieurscultuur” te

komen naar een meer “economische, gebruikgerichte cultuur”. Dergelijk beleid is in de nota *Mobiliteit* voorzien. Het kabinet zegt toe dit wel in versterkte mate en in onderlinge samenhang te zullen doen.

De nota *Mobiliteit* zegt overigens niet meer dan dat het rijk onderzoekt of de basis onderhoudsnorm die geldt voor het hele hoofdwegennet, kan variëren per locatie en dat in de toekomst onderhoud steeds meer innovatief zal worden aanbesteed (Ministerie van Verkeer en Waterstaat 2004: 41). De concrete baten van dergelijk beleid worden echter niet in beeld gebracht. Hopelijk onderkent het kabinet het belang van de door de IBO bepleitte aanpak. Hier zijn in ieder geval aanzienlijke winsten te behalen.

### 3.3-9 DE SOCIALE KANT VAN INFRASTRUCTUUR

De Boer van de TU Delft volgt al bijna veertig jaar de wijze waarop de hoge en lagere overheden met de sociale kanten van infrastructuur omgaan (De Boer 2001).

Volgens De Boer heeft de rijksoverheid na 1970 steeds meer te maken gekregen met toenemende weerstand tegen wegnutbreiding. De A4 Midden-Delfland was hier onlangs een voorbeeld van. De gemeenten Schiedam en Vlaardingen bouwden zelfs met opzet flats langs het tracé om aanleg van de weg onmogelijk te maken (De Boer 2006). De sociale effecten kunnen in projectnota's de nodige aandacht krijgen, maar dat houdt in de praktijk niet over, waardoor een stadswijk gemakkelijk het slachtoffer is van handjeklap tussen het rijk en de gemeente. Dat laatste is zeker het geval indien de projecten lokale voordelen opleveren. Bij de aanleg of aanpassing van infrastructuur wordt te weinig aandacht besteed aan de omwonenden (De Boer en Van der Heijden 1990).

De rijksoverheid heeft de TU Delft in de jaren tachtig de sociale effectbeoordeling laten ontwikkelen, die voortbouwde op de Amerikaanse praktijk van de social impact assessment.

In de handleiding *Op en in de weg* staan rubrieken als veiligheid (sociaal en voor langzaam verkeer), bereikbaarheid (langzaam verkeer), barrièrewerking van wegen, visuele hinder, gedwongen vertrek van bewoners en sociale integratie in betrokken wijken. In het maandblad *Vitale Stad* geeft De Boer een voorbeeld van deze wijze waarop met burgers wordt omgegaan.

“In Dordrecht werd in 2003 het oude geluidsscherm langs de rijksweg door een nieuw vervangen. Het oude scherm, al gauw een kilometer lang, werd eerst volledig gesloopt voordat men aan het nieuwe begon. Door deze aanpak zaten de bewoners de maximale periode zonder bescherming, terwijl het toch ook gefaseerd had gekund. Bij het plaatsen van de gebogen betonnen stijlen voor het spectaculaire nieuwe scherm werd ontdekt dat er scheurtjes in het beton zaten. De bouw werd stilgelegd en men nam een half jaar de tijd om uit te vechten wie daarvoor de rekening moest krijgen. Al die tijd zaten de bewoners over de volle lengte zonder scherm. Ook het groen was natuurlijk gekapt, want je hebt ruimte nodig om te kunnen bouwen. Als compensatie kregen de bewoners met Sinterklaas een stuk gevulde speculaas in de vorm van een betonnen stijl (dat er geen

ongelukken gebeurd zijn. ...). Ik werd voor de nieuwe schermen in Zwijndrecht ingehuurd om een bewonersondersteuner bij te staan. Ik heb hem voorgesteld: eis dat het oude scherm blijft staan tot het nieuwe klaar is. Hij durfde dat niet. Natuurlijk is het oude scherm eerst compleet gesloopt. Vervolgens is het nieuwe gebouwd ...op een nieuwe constructie naast de weg” (De Boer 2006: 18).

### 3.4 TOT SLOT

In de publicatie *Krachtenfusie van de inrichting van Nederland* wordt geconstateerd dat de besluitvormingsprocedures voor het ontwikkelen van infrastructuur nodig een cultuuromslag dienen te ondergaan (De Rooij (red.) 2006). De in dit hoofdstuk behandelde aspecten van infrastructuurplanning bieden tal van aanknopingspunten die bij kunnen dragen aan deze cultuuromslag. De publieke belangen die met mobiliteit zijn gemoeid zullen hier aanzienlijke voordelen van ondervinden.

Met aanleg, beheer en onderhoud van weginfrastructuur zijn enorme bedragen aan belastinggeld gemoeid. Op rijksniveau is er volgens de nota *Mobiliteit tot 2020* ruim 80 miljard euro nodig. Als die er komen en als de situatie niet verbetert, die de Parlementaire Enquêtecommissie heeft geconstateerd dat door kartelafspraken een prijsverhogend effect van tien procent heeft plaatsgevonden, dan dreigt om die reden alleen al een verlies van 8 miljard euro.

Verbetering van de langetermijnprognoses en van de afwegingstechnieken zoals maatschappelijke kosten-batenanalyse is van groot belang; momenteel zijn deze technieken nog verre van ideaal. Vooral ook de uniforme toepassing hiervan op de verschillende terreinen van financiering van infrastructuur dient bevorderd te worden. De rol van kwalitatieve quick scans op het terrein van de ruimtelijke economische ontwikkeling zou terug gedrongen moeten worden en op het gebied van onderhoud en beheer zou meer aandacht voor de economische aspecten zeker gerechtvaardigd zijn.

Gemeenten zijn vaak sterk begaan met de publieke belangen die hun inwoners raken. Om de rol van gemeenten in dit besluitvormingsproces te versterken is een aantal suggesties gedaan.

Verder is het van belang infrastructuur als een productiefactor te beschouwen en vooral de indirecte effecten adequaat in de beschouwingen te betrekken.

## NOTEN

- 1 Bijvoorbeeld *NRC Handelsblad*, 3 maart 2007, Vandaag een normale ochtendspits: 220 km file.
- 2 Zie bijvoorbeeld de discussie over de verbreding van de A4.
- 3 *De Volkskrant*, 27 oktober 2007, Verzet Diemen tegen snelwegplan.
- 4 Ministerie van Verkeer en Waterstaat, VROM, e.a. (2007) MIRT 2008, Den Haag, blz. 13.
- 5 Eerste Kamer der Staten-Generaal (2005) Motie Lemstra c.s. inzake lange termijninvesteringsstrategieën op het gebied van ruimtelijk-economisch beleid in Nederland (EK, XXI-C), Den Haag: Sdu Uitgevers.
- 6 Tijdelijke Commissie Infrastructuurprojecten, Den Haag: Tweede Kamer der Staten-Generaal, vergaderjaar 2004-2005, 29283, nr. 6.
- 7 Provincie Zuid-Holland (2005) Bijlage 5, Verslagen openbare hoorzittingen, bijv. blz. 75, 78, 79.
- 8 Provincie Zuid-Holland (2005) Bijlage 5, Verslagen openbare hoorzittingen, blz. 126.
- 9 Bundesminister für Verkehr (1993): Gesamtwirtschaftliche Bewertung von Verkehrsweegeinvestitionen, Bewertungsverfahren für den Bundesverkehrswegeplan 1992, Schriftenreihe des Bundesministers für Verkehr, Heft 72, Bonn.
- 10 *De Volkskrant*, 22 juli 2006, De gouden driehoek voor energiesector, in Noord-Nederland blazen jonge energiebedrijven de traditionele gassector nieuw leven in.

## LITERATUUR

- Algemene Rekenkamer (2001) *Aanleg Betuweroute: projectbeheersing en financiering*, Den Haag.
- Aschauer, D. A. (1989) Is public expenditure productive? *The Journal of Monetary Economics*, 1989, p. 177-200.
- Armstrong, H., J. Taylor (1992) *Regional Economics and Policy*, New York/London: Harvester.
- Bochove, R. van (2006) *De gefragmenteerde A15-zone. Hoe koppelingen in een gefragmenteerde beleidswereld tot stand komen*, Erasmus Universiteit Rotterdam.
- Boer, E. de (2006) 'De noodzaak voor een betere verantwoording en zorg', *Vitale Stad*.
- Boer, E. de (2001) *Barriëreffekter, Trennwirkung, a severely neglected problem in road planning and research*, TU Delft.
- Boer, E. de, R. E. van der Heijden (1990) *Op en in de weg, methoden en technieken* bij het hoofdstuk 'Sociale aspecten', TU Delft.
- Bundesminister für Verkehr (1993): *Gesamtwirtschaftliche Bewertung von Verkehrswegeinvestitionen, Bewertungsverfahren für den Bundesverkehrswegeplan 1992*, Schriftenreihe des Bundesministers für Verkehr, Heft 72, Bonn.
- Chavannes, Marc (1994) *De Stroperige Staat. Kanttekeningen bij de liefste democratie op aarde*, Amsterdam: Contact.
- CPB (januari 2007) *Beoordeling projectvoorstel luchtkwaliteit*.
- CPB (2005) *Leren van investeren. Analyse van investeringsvoorstellen in kennis, milieu en ruimtelijke economie*.
- CPB (2004) *Beoordeling projecten in het kader van de afweging vrije ruimte 2011-2014*.
- CPB (1998) *Kiezen of delen: ICES-maatregelen tegen het licht*, werkdocument 103.
- Dauvellier, P., J. de Jonge e.a. (2006) 'Het planproces binnenstebuiten. Krachtenfusie in de inrichting van Nederland' in A. de Rooij (red.) (2006) *Krachtenfusie in de inrichting van Nederland, Fysica van Samenwerking II*, Diemen: Veen Magazines BV.
- Eerste Kamer der Staten-Generaal (2005) *Motie Lemstra c.s. inzake lange termijn investeringsstrategieën op het gebied van ruimtelijk-economisch beleid in Nederland (EK, XXO-C)*, Den Haag: Sdu Uitgevers.
- Enthoven, G., H. van Zijl (2006) 'Integratie van bestuurlijke kennisgebieden is onvermijdelijk' in A. de Rooij (red.) (2006) *Krachtenfusie in de inrichting van Nederland, Fysica van Samenwerking II*, Diemen: Veen Magazines BV.
- Heijden, G. van der (2005) *Recombinatie van Overheid en Samenleving*, Delft: Eburon.
- Hennipman, P. (1962) *Doeleinden en criteria der economische politiek*, Leiden: Samsom.
- Interdepartementaal Beleidsonderzoek (2005) *Onderhoud beter onderhouden. Eindrapportage van de werkgroep beleid en onderhoud infrastructuur, 2004-2005, nr. 4*.
- Keijts, B. (2006) Een overheidsdienst zoekt naar nieuwe oplossingen in A. de Rooij (red.) (2006) *Krachtenfusie in de inrichting van Nederland. Fysica van Samenwerking II*, Diemen: Veen Magazines BV.

- Ministerie van Verkeer en Waterstaat, VROM, e.a. (2007) MIRT 2008, Den Haag.
- Ministerie van Verkeer en Waterstaat, Ministerie van Economische Zaken, (2004) *Indirecte Effecten Infrastructuurprojecten, Aanvulling op de Leidraad OEI*.
- Ministerie Verkeer en Waterstaat, Ministerie van VROM (2004) *Nota Mobiliteit Naar een betrouwbare en voorspelbare bereikbaarheid*.
- NRC Handelsblad, Vandaag een normale ochtendspits: 220 km file, M-magazine, 3 maart 2007.
- Provincie Zuid-Holland (2005) *Willen en wegen*. Onderzoeksrapport Ecorys, Verslagen en Bijlagen openbare hoorzittingen.
- Parlementaire Enquêtecommissie Bouwnijverheid (12 december 2002) Eindrapport, Den Haag: Tweede Kamer der Staten-Generaal, vergaderjaar 2002-2003.
- Raad van State (25 juli 2007) Uitspraak 200602152/1.
- Raad voor Verkeer en Waterstaat, (2004) *Hoezo marktwerking. . .?, Over de borging van publieke belangen en effectief trajectmanagement bij veranderingen in de markt-ordering van vitale infrastructuurgebonden sectoren*, Den Haag.
- Rooij, A. de (red.) (2006) *Krachtenfusie in de inrichting van Nederland. Fysica van Samenwerking II*, Diemen: Veen Magazines BV.
- Ruimtelijk Planbureau, Milieu en Natuurplanbureau (mei 2007) *De ruimtelijke vraagstukken van de toekomst voor de beleidsagenda van nu*, Bilthoven.
- Schwarz, P.G. (2007) 'Strategische besluitvorming in het publieke domein, Een spiegeling aan het private domein', *Holland Management Review*, nr. 112, 2007.
- Spaink, E. (2006) Werken aan werkelijk maatschappelijk resultaat, in A. de Rooij (red.) (2006) *Krachtenfusie in de inrichting van Nederland. Fysica van Samenwerking II*, Diemen: Veen Magazines BV.
- Stern, N. (january 1991) The determinants of growth, *The Economic Journal*, p. 122-133.
- Stichting Analyse en Verificatie Onderzoek Luchtkwaliteit (SAVOL) (juni 2006) Beoordeling luchtkwaliteit in verband met Tracébesluit A4 Burgerveen-Leiden 2004.
- Tanis, M.P. (2005) *Versterking Integriteit, Confidence, Openness and Relativity!*, *Versterking van de integriteit door bedrijfsmatig werken bij Rijkswaterstaat*, Rotterdam, p. 54, 62.[vgl. Stern]
- Tijdelijke Commissie Infrastructuurprojecten, Tweede Kamer der Staten-Generaal (2004-2005), vergaderjaar 2004-2005, 29283, nr. 6.
- Toen-Gout, M.W., M.M. Jongeling (1993) Investeren in infrastructuur en economische groei, *ESB*, 12-5-1993.
- Volkskrant, de*, Verzet Diemen tegen snelwegplan, 27 oktober 2007, verkrijgbaar op: [http://www.volkskrant.nl/binnenland/article473825.ece/Verzet\\_Diemen\\_tegen\\_snelwegplan](http://www.volkskrant.nl/binnenland/article473825.ece/Verzet_Diemen_tegen_snelwegplan).
- Volkskrant, de*, De gouden driehoek voor energiesector, 'in Noord Nederland blazen jonge energiebedrijven de traditionele gassector nieuw leven in', 22 juli 2006.
- Vooren, F.W.C.J. van de (2001) *Regionale Effectanalyse van Infrastructuurprojecten*, Research Paper 2001-026, Transport en Ruimtelijke Economie, Universiteit van Antwerpen.
- Vooren, F.W.C.J. van de (2004) *Modelling transport in interaction with the economy*, *Transportation Research Part E*, 40, p. 417- 437.
- Whynes, D.K., R.A. Bowles (1989) *The Economic Theory of the State*, Oxford: Martin Roberston.

- Wijnen, W. (2005) *Economie en Verkeersveiligheid*, Stichting Wetenschappelijk Onderzoek Verkeersveiligheid SWOV, Platform Economie.
- Wynia, P. (2006) *Borging van publieke belangen bij nieuwe beheervormen voor weginfrastructuur*, Erasmus Universiteit Rotterdam.

## 4 EUROPEAN REGULATORS IN THE NETWORK SECTORS: REVOLUTION OR EVOLUTION?

*Saskia Lavrijssen-Heijmans<sup>1</sup> and Leigh Hancher<sup>2</sup>*

### 4.1 INTRODUCTION

The coming into force of the electronic communications directives, the energy directives and Regulation 1/2003 has given the European Commission a new set of instruments to safeguard the uniform application of European law by the 27 independent national regulatory authorities founded by the member states in implementation of European legislation.<sup>3</sup> On the one hand, the Commission has itself acquired wide-ranging powers to monitor and regulate the national authorities both directly and *ex ante*. It has the power to formulate *ex ante* rules, including binding comitology guidelines<sup>4</sup> and European policy rules<sup>5</sup> which, on the grounds of Article 10 EC and specific co-operation obligations laid down in European legislation, national authorities must take into account when exercising their powers.<sup>6</sup> The Commission also has the power, in the interests of uniform application of European law, to intervene *ex ante* in national procedures by making comments,<sup>7</sup> vetoing decisions<sup>8</sup> and/or removing a national authority from a case.<sup>9</sup> On the other hand, the Commission has increasingly used ‘hybrid’ forms of regulation through the founding of independent European networks of national regulators. Within these networks, the national regulatory authorities in the various member states must co-operate with each other and with the Commission to guarantee uniform application of European law. These networks include the European Energy Regulators Group (EREGG),<sup>10</sup> the European Regulators Group for Communications Networks and Services (ERG)<sup>11</sup> and the European Competition Network (ECN).<sup>12</sup> A network of financial regulatory authorities had already been set up earlier in the financial sector, in the form of the Committee of European Securities Regulators (CESR).<sup>13</sup>

The European networks of national regulators are hybrid in nature. Their lack of legal personality means they do not have the status of ‘EU independent agencies’ which, established on the basis of European regulations, do have legal personality and are able to carry out their daily tasks at one remove from the European institutions.<sup>14</sup> Neither are the European networks national agencies. The independent European networks of national regulators are increasingly manifesting themselves as autonomous entities. Through hybrid forms of regulation (such as Common Positions or European policy rules) created as a consequence of the interaction between informal European and national actions, they are able to influence the decisions of both the Commission and the national authorities.<sup>15</sup>

As part of the reform of European legislation in the network sectors, the Commission is currently looking at the possibilities for uniform application of European law in the member states and looking at ways of improving the co-

ordination between the different national regulatory authorities (see section 6). The Commission wishes to increase its own ex ante powers and is examining whether the role of the European networks of national regulators could be further strengthened by the creation of 'European networks plus'. It recently published a proposal for a Regulation founding a European Agency for the Co-operation between Energy Regulators.<sup>16</sup> As this paper will show, owing to the hybrid nature of the European networks and their actions, there are a number of 'accountability gaps' both in the present situation and in the proposals for the 'European networks plus'.<sup>17</sup>

This article analyses the problems which arise with regard to the political and legal accountability of the independent national regulatory authorities which work together with each other and with the Commission in the European networks of national regulators or the 'European networks plus'. It devotes attention to the political monitoring by and accountability to the European Parliament and/or the national parliaments at the European and national level, respectively, and to the potential role of judicial oversight by the European Court of Justice and the national courts. A distinction is consistently drawn between the present situation of more informal co-operation between the national regulatory authorities in the European networks and the strengthened co-operation within the 'European networks plus'. This article also makes a number of proposals for improving the accountability of the 'European networks plus'.

#### **4.1.1 STRUCTURE OF THE ARTICLE**

Section 2 presents an analysis of the types of networks currently operating at European level. Section 3 uses examples to discuss the potential legal impact of the actions of the present European networks of national regulators. Section 4 explores the relationship in the present structure between the activities of the European networks and the various powers of the European Commission, including how the Commission can steer/influence the actions of the European networks. Section 5 analyses the problems in relation to the democratic and legal oversight of the activities of the European networks in the present structure. Section 6 considers whether the 'European networks plus' offer a solution to the observed accountability gaps and whether they create new accountability problems. This section also looks at other possible ways of improving the accountability of the 'European networks plus'. The article ends with a number of conclusions.

## **4.2 CHARACTERISATION OF DIFFERENT NETWORKS**

### **4.2.1 EU INDEPENDENT AGENCIES**

There are several different networks of national regulatory authorities with diverse functions and structures operating at EU level. First there are the independent agencies, which operate according to a network model.<sup>18</sup> Independent EU agencies have a certain amount of independence from the EU institutions in

the day-to-day performance of their tasks, a fact expressed in their legal personality and/or their independent decision-making authority.<sup>19</sup> They are not fully independent, however; their policy is formulated by a Management Board consisting of representatives of the member states and the EU institutions, while their decisions may be subjected to scrutiny by the Commission and/or the European Court of Justice.<sup>20</sup>

The European Medicines Agency (EMA) is an example of an independent agency.<sup>21</sup> One of the tasks of the EMA is to provide scientific advice of the highest level to the Commission and the member states on applications for Community-wide product marketing authorisations. The Commission then takes a decision based on this advice on whether the products in question should be licensed for use in the EU. The EMA is referred to as a 'regulatory independent agency' on account of the substantive expertise it brings to the implementation of a highly complex body of European rules in specific cases.<sup>22</sup> The advice given by the EMA is based mainly on expertise and contains no major policy judgements. Although the European Commission has the formal power to take decisions on the authorisation of medicinal products, in practice it often adopts the recommendations of the EMA without scrutinising them to any real extent ('rubber-stamping').<sup>23</sup>

#### 4.2.2 INDEPENDENT EUROPEAN NETWORKS OF NATIONAL REGULATORS

In addition to the independent central networks of national regulatory authorities ('EU independent agencies'), an increasing number of independent decentralised regulatory networks of national authorities (European networks of national regulators) operate at the European level. The independent decentralised networks do not form part of an independent agency and are required to work closely with the European Commission. With the exception of the ECN, the Commission is not formally a member of the networks. However, the Commission does attend all meetings, plays an active part in them and provides the secretariat for the ERG, the ERGEG and the ECN. In most cases the Commission established the networks pursuant to a Decision. The ECN is an exception, having been created pursuant to a Commission Notice.<sup>24</sup> In the present situation, the networks do not have independent decision-making authority, but constitute a forum within which the decentralised application and enforcement of European rules is informally co-ordinated and harmonised. At present, in contrast to the EU independent agencies, they do not have their own legal personality and have no Management Board.

##### ***An alternative to EU independent agencies***

The European Commission set up the independent decentralised regulatory networks of national authorities as an alternative to the central regulatory networks or EU independent agencies. Since the Commission is largely dependent on the national regulatory authorities of the member states for the implementation of complex European legislation, the risk that European legislation will be applied in differing ways is a real one. With this in mind, the question was raised

as to whether the Commission, partly in light of the subsidiarity principle, should play a more active and operational role in the implementation of European legislation, rather than the traditional approach of charging the member states with that implementation?<sup>25</sup> Against the background of the growth in its policy tasks and the increasing politicisation of the Commission, several researchers have argued that it is not the Commission but EU independent agencies which should have a greater role in the implementation of complex EU legislation. The founding of independent agencies at the EU level, they argue, would offer guarantees for an objective and transparent decision-making process, in which the various responsibilities of the EU institutions, the member states and the independent agencies could be made clear.<sup>26</sup>

To date, however, the member states and the EU institutions have been lukewarm towards the founding of independent EU agencies. Researchers and EU institutions argue that the Meroni judgement of 1958 runs contrary to the delegation of discretionary powers to independent agencies, because such delegation would lead to frustration of the institutional balance of the EC Treaty.<sup>27</sup> Although several authors have argued convincingly that another reading of Meroni is possible<sup>28</sup> and that under certain circumstances the institutional balance can be served by the delegation of certain discretionary powers to EU independent agencies, the political climate to date has been unfavourable for the founding of such bodies.<sup>29</sup>

As the application of the European competition rules (Articles 81 and 82 EC) and the implementation of the European directives in the network sectors give the implementing authorities considerable freedom of choice, the above political and legal factors have impeded the founding of EU-independent agencies in these areas. Furthermore, the member states do not readily relinquish powers in sectors which were previously dominated by state monopolies.<sup>30</sup> In founding the European networks, the Commission was formalising an existing practice, because the national regulatory authorities of the various member states were already co-operating at national level to ensure the effective exercise of powers.<sup>31</sup> Section 6 discusses the fact that in the periodic evaluations of European legislation, the European Commission consistently raises the question of whether an EU-independent agency should be created.

### ***Independent European networks in the areas of competition policy and economic regulation***

CESR is a decentralised European regulatory network of national authorities in the financial sector.<sup>32</sup> This network served as an example for the creation of decentralised regulatory networks of national authorities (the ERG, the ERGEG and the ECN) in the fields of economic regulation and competition policy.

Like CESR, the ERGEG has the task of advising the European Commission on draft comitology guidelines (known as 'level 2' measures), which the Commission has to adopt pursuant to the regulatory procedure of the Comitology Decision.<sup>33</sup> The

comitology guidelines flesh out the basic principles of the European guidelines (the 'level 1' measures) into detailed technical rules. The comitology guidelines are binding for the national authorities. Both the ERG and the ECN advise the Commission on the formulation of European policy rules, which the national regulatory authorities, pursuant to Article 10 EC and the specific co-operation obligations set out in European legislation, must take into account when exercising their powers.<sup>34</sup> The ERG advises the Commission on matters such as the adoption of the 'Recommendation on Relevant Markets' and the 'Market Analysis Guidelines', which the national authorities are required to take into account when exercising their powers.<sup>35</sup>

Under EU legislation, the members of the ERG and the ECN can also comment on draft decisions by fellow national authorities, which those authorities must take into account.<sup>36</sup> They give advice on regulatory powers that implement the main policy choices in European legislation and the European policy rules of the Commission and/or the networks in specific cases. Such decisions (relating inter alia to market definitions and the assessment of market power) are often accompanied by complex legal and economic analyses and therefore incorporate a certain freedom of choice.

The activities of the European networks of national competition authorities also show many correspondences with the 'level 3' activities of CESR, with co-ordinated implementation, monitoring, supervisory convergence and regulatory convergence.<sup>37</sup> Co-ordinated implementation means that the national authorities, as far as permitted at national level, have the power to convert certain European technical measures into national rules, or that they act as formal or informal advisors to the legislator for the implementation of European legislation into national legislation. The national authorities also fulfil a monitoring function with regard to the operation of the market, European legislation and its implementation and execution by the member states. Regulatory convergence means that the national authorities foster the uniform and effective decentralised implementation of European legislation through the formulation of Common Positions (European policy rules), the drafting of best practices and the carrying out of peer reviews. The national authorities also work together in the practical implementation and enforcement of European rules in matters of mutual importance through the exchange of information and the co-ordination of national procedures (supervisory convergence).

The founding decrees for the ERGEG, the ERG and CESR explicitly encourage the European networks to aim for regulatory convergence. Carrying out this task, among other things through the formulation of European policy rules, can entail economic and legal choices. The Commission Notice with respect to the ECN is aimed mainly at supervisory convergence in matters of mutual importance through the promotion of an efficient task division and case allocation where parallel powers are concerned, as well as an effective and coherent application of the competition rules in specific cases.<sup>38</sup> However, informal, substantive policy

co-ordination also takes place at a general level within the ECN (see also section 4).<sup>39</sup>

**Tabel 4.1 Correspondences/differences between networks**

	LEVEL 2			LEVEL 3		
<b>Network</b>	Advisory: Comitology guidelines	Advisory: Commission policy rules	Advisory: Exercise regulatory powers Comm/nra in specific case	Co-ordinated implementation and monitoring European policy rules	Regulatory convergence: formulation of	Supervisory convergence: Co-operation/ Co-ordination in matters of mutual importance
<b>EMEA</b>			X			
<b>CESR</b>	X			X	X	X
<b>ERG</b>		X	X	X	X	X
<b>EREGG</b>	X			X	X	X
<b>ECN</b>		X	X	X	X	X
						(also allocation of cases)

130

### 4.3 THE LEGAL EFFECTS OF THE NETWORKS' ACTIVITIES

Unlike the EU-independent agencies, the decentralised European networks of national regulatory authorities can not in principle take binding decisions in the current structure. However, using examples, this section shows that the activities of the European networks can have legal effects and can impinge on the rights and obligations of stakeholders. The intensity of those legal effects can vary depending on the nature of the activities of the European networks. As the proposals of the ERGEG and the Commission to strengthen the position of the European network operators in decision-making procedures (see section 6) suggest, most attention is often given to the influence on the position of the regulated market players. The latter are the subject of decisions by the national regulatory authorities in which European policy rules or recommendations from the European networks are applied. However, competitors, clients and the consumer can also experience economic consequences in the form of the tariffs and conditions that the regulated market players are allowed to apply. Therefore the position of these stakeholders can also not be ignored.

#### 4.3.1 ADVISORY ACTIVITIES

The European networks are an important source of advice for the European Commission on the adoption of European policy rules and/or comitology guidelines. In principle, their advice is not binding. However, if the Commission adopts the advice of the networks and incorporates it in comitology guidelines

that are binding on national authorities, it does acquire binding force. By contrast, if the Commission adopts policy rules on the basis of the advice, the advice does not become binding. On the other hand, European policy rules formulated by the Commission can also have regulatory effects, because the national authorities have taken them into account pursuant to Article 10 EC and specific European co-operation obligations.<sup>40</sup>

An example of adoption by the Commission is the advice of the ERGEG relating to an amendment of the guidelines for congestion management which were appended to the Electricity Regulation.<sup>41</sup> At the request of the Commission, and after extensive consultation with the stakeholders, the ERGEG officially published its advisory report in 2005. The Commission adopted the ERGEG recommendations and submitted the proposals to the comitology procedure by seeking the advice of the Comitology Committee,<sup>42</sup> which unanimously approved the proposal. The guidelines were then sent to the European Parliament, which raised no objections. The Commission has since adopted the guidelines.<sup>43</sup>

#### 4.3.2 EUROPEAN POLICY RULES

It is striking that several European networks are increasingly adopting European policy rules in which arrangements are made regarding the application and interpretation of European law.<sup>44</sup> An example is the Common Position of the ERG on the imposition of appropriate remedies on undertakings which are designated as having Significant Market Power (Remedies Position).<sup>45</sup> The content of this Position reveals that legal and economic choices can be made in the formulation of European policy rules, which imply a weighing of interests, such as the decision to promote competition in services or competition in infrastructure. The ERGEG has also drawn up various European policy rules, encouraged by the Commission and after extensive stakeholder consultation, such as the 'Guidelines For Good TPA Practice For Storage System Operators'.<sup>46</sup> The latter policy rules were adopted by the Madrid Forum, an informal gathering in which representatives of the member states, the national regulatory authorities, the Commission and the stakeholders meet every two years and work on a voluntary basis to achieve solutions to the legal and technical impediments to the cross-border trade in energy.<sup>47</sup> Although initially the ECN does not have the official task of adopting European policy rules, it recently adopted a 'Model Leniency Programme'.<sup>48</sup>

EU legislation contains no explicit basis for the formulation of European policy rules by the networks; an implicit basis can be found in the power of the national regulatory authorities to formulate policy rules on the fleshing out and interpretation of their national powers. It is worth noting here that it is a form of good governance for the national authorities to formulate policy rules on the collaboration with regulatory authorities from other member states and the Commission where they relate to powers with cross-border effects. The legal status of policy rules drawn up by the networks in European and national law has not yet fully crystallised. In principle, they are non-binding and cannot impose obligations on market players. Nevertheless, it is argued that European policy rules can have

regulatory effects; it is claimed that the national authorities are in principle bound by European and national principles of good governance, in particular the principle of legitimate expectations, the principle of due care and the principle of equality of treatment, to act in accordance with published European positions on which they have collaborated.<sup>49</sup> The situation may be different if some national authorities have expressly distanced themselves from (certain elements of) policy rules, for example by negotiating an opt-out to acceptance of the policy rules.

Also relevant is the fact that, pursuant to the case-law of the European Court of Justice, national authorities are bound, on the basis of Article 10 EC, to take all measures in cases with cross-border aspects to guarantee an effective and consistent application of European law.<sup>50</sup> The Administrative Law Division of the Dutch Council of State interprets this obligation in such a way that national authorities are required pursuant to Article 10 EC to use co-operation arrangements or co-ordination mechanisms created on the basis of European regulations in cases with European aspects.<sup>51</sup> The energy directives, the electronic communications directives, Regulation 1/2003 and the Commission Decisions establishing the networks also incorporate special mechanisms and explicit obligations for the national regulatory authorities to co-operate with each other and with the Commission.<sup>52</sup> The conclusion, in light of prior case-law, is that European policy rules can be seen as an expression of the specific obligations under European law to co-operate as these arise from the European directives and Regulation 1/2003, which are an elaboration of Article 10 EC and which the national authorities must take into account when exercising their powers.<sup>53</sup>

In light of the foregoing, the national authorities must take account of the European policy rules of the European networks, but this obligation is not unconditional. As with national policy rules (see Section 4:84 of the Dutch General Administrative Law Act Awb), the national authorities have the power to deviate from the rules if specific national circumstances so require for an effective and proportionate application of European law, if the policy rules are vague or if they are contrary to European law. Moreover, the policy rules can only relate to the way in which the national authorities interpret and apply existing powers; they cannot lead to the delegation of new powers to the national authorities.

#### 4.4 THE COMMISSION AS FIRST AMONG EQUALS OF THE NETWORKS

At first sight, under the present arrangements, the European networks of national regulatory authorities appear to have considerable autonomy vis-à-vis the European Commission. However, the Commission occupies a 'first among equals' position vis-à-vis the national authorities, both singly and acting together in the European networks. As *primus inter pares*, the Commission possesses the traditional Treaty powers (Art. 226 EC, Art. 81 and 82 EC and Art. 86, para 3 EC)<sup>54</sup> as well as new ex ante regulatory powers which it can apply for the imposition of its policy lines on national authorities, both singly and working together in the

European networks. The Commission can use these powers to exert pressure on national authorities and/or market players to comply with the European policy rules of the networks, on which the Commission has collaborated. The Commission can monitor and report on compliance with the policy rules, and can, for example, decide to embed the European policy rules in European legislation (e.g., in the form of Regulations or comitology guidelines), if it feels that compliance is deficient.<sup>55</sup>

The Commission can also comment on a decision by a national regulatory authority, threaten to use a veto and ultimately do so, if it believes that the decision in question is not in accordance with the European policy rules of the networks. An analysis of the comments and veto decisions of the European Commission pursuant to Article 7 of Directive 2002/21/EC reveals that the Commission is not afraid to subject draft decisions by the national authorities to in-depth scrutiny.<sup>56</sup> For example, following an in-depth investigation, the Commission threatened to veto a decision by OPTA (the Dutch regulatory authority for the regulation and supervision of the telecommunications market) relating to the regulation of end-user tariffs for the delivery of broadcasting services.<sup>57</sup> In a letter to OPTA setting out its serious doubts about the decision, the Commission was not afraid to impose its opinion on OPTA and to direct its argument towards the results of its policy (as laid down in the Commission Recommendation on relevant markets). As well as being unconvinced that there were insufficient competitive opportunities in this market, the Commission believed that the obligations (remedies) proposed by OPTA were not in accordance with the Remedies Position of the ERG as supported by the Commission.<sup>58</sup> A nice detail in this case was that the Lower House of the Dutch Parliament had actually pushed for regulation of the tariffs in question by OPTA.<sup>59</sup> Ultimately, the Commission and OPTA reached a compromise, in the sense that OPTA relaxed the proposed regulation and the Commission withdrew its objections.<sup>60</sup> The Commission is not obliged to publish its comments on draft decisions pursuant to Article 11 para 4 of Regulation 1/2003. In view of the experiences with the Article 7 procedure of Directive 2002/21/EC, it is not unlikely that the Commission will also scrutinise the decisions of national competition authorities closely on the grounds of Regulation 1/2003 and threaten to remove those authorities from the case if it believes that its policy is not being implemented correctly.

#### 4.5 ACCOUNTABILITY GAPS

It is clear that, despite the fact that the European networks of national regulatory authorities do not have the power in the present structure to take binding decisions, their activities can nonetheless have legal effects on the grounds that the national authorities, pursuant to Article 10, EC and specific European co-operation obligations must take into account European policy rules formulated by the networks. The Commission verifies whether the national authorities apply the policy rules and is not afraid to use its ex ante regulatory powers to enforce compliance. As a result, European policy rules formulated by the European

networks can acquire de facto binding effects. If the national authorities incorporate the policy rules of the networks in their national decisions, the result is that the policy rules can impinge on the rights and obligations of stakeholders. This begs the question of to whom the networks should be politically accountable and by whom they can be held accountable.<sup>61</sup> It also raises the question of whether and in what way adequate legal protection is available to the stakeholders against actions by the networks, which affect their interests.

According to Thatcher and Coen, European institutions change gradually and in a series of steps that are built upon existing structures.<sup>62</sup> They show that there is a gradual institutional development within the network sectors towards more centralisation, from no co-ordination to informal co-ordination, to European networks of national regulatory authorities and to 'European networks plus'. This evolution is fostered by external factors, such as the need for more intensive co-operation on cross-border problems, as well as by endogenous factors. As the proposals of the European networks and of the Commission illustrate (see section 6), one important endogenous factor is that existing organisations and institutions do not put forward revolutionary proposals for institutional change, but prefer to reinforce and extend their existing roles and powers. The following sections analyse the opportunities and difficulties in relation to the political and legal accountability of the European networks in the present structure. Section 6 explores whether the proposals for the creation of 'European networks plus' offers solutions to the observed accountability gaps, or whether they merely lead to new problems.

#### 4.5.1 POLITICAL ACCOUNTABILITY

The independent European networks of national regulatory authorities (both in the present structure and in the 'plus' form) are the product of the double delegation of tasks and powers by the national authorities and the European Commission.<sup>63</sup> On the one hand, the national authorities have delegated power to the European networks to co-ordinate the application of European law and to make the necessary policy arrangements in that regard. On the other hand, the Commission has delegated the power to oversee the correct and uniform application of European law and to take measures to foster consistency. The national authorities and the Commission have in turn acquired the delegated power at national and European level, respectively, to execute European legislation. This presence of several delegation relationships raises the question of who is responsible for what and who monitors the way in which the delegated powers are exercised.

Since the European networks are not an EU institution in the present structure, they are – unlike the Commission – not politically accountable at the European level at all, though the European Parliament can call a Commissioner before an EP committee and demand an explanation of the way in which the Commission has co-operated with the national authorities in the European networks.<sup>64</sup> The

national parliaments can also summon the responsible ministers (and sometimes the national regulatory authorities) and require an explanation, but they cannot call European Commissioners to account. The background study by the Netherlands Court of Audit on market supervision refers in this connection to an ‘accountability vacuum’.<sup>65</sup> The Court of Audit also refers to the vision on market supervision (‘Visie op Markttoezicht’) of the Dutch minister of Economic Affairs, in which it is stated that the Minister must, of course, be aware in advance of the arrangements that the national regulatory authorities make with each other, and if necessary must be able to issue instructions in areas where the Minister has policy responsibility.<sup>66</sup> It is unclear, however, whether this actually occurs in practice. Unfortunately, the recent report by the Netherlands Court of Audit on the functioning of the Dutch Competition Authority NMA and the supervision (by the minister) of the NMA devote no attention to this crucial point.<sup>67</sup> Moreover, because of the consensus-driven co-ordination process within the networks, it is possible that the general instructions of the minister have only a limited influence on the content of the European policy rules drawn up by the networks. It is argued that the minister in such a case cannot simply ignore the definitive European policy rules, and that the minister does not guarantee the effective application of European law if, when formulating general instructions which are disadvantageous to the stakeholders, he takes no account of the European policy rules formulated by the networks in implementation of Article 10 EC and specific co-operation obligations under EU law.

#### 4.5.2 TRANSPARENCY

To compensate for the political ‘accountability gap’ of the present European networks, it is very important that their actions are couched in clear procedural rules regarding the giving of a fair hearing to all sides and on the transparency of their activities.<sup>68</sup> Transparency is, of course, not a substitute for accountability.<sup>69</sup> However, transparency can promote accountability, in the sense that politicians and stakeholders will be able to monitor the actions of the networks and demand an explanation of them. Whilst it is to be applauded that several European networks act in a transparent manner in practice and consult extensively with stakeholders on draft positions and recommendations, it is a gap in European legislation that it contains virtually no procedural rules for the activities of the networks.<sup>70</sup> In addition, the hybrid status of the networks means there is a considerable lack of clarity about the right of stakeholders to access the documents of the European networks.<sup>71</sup> With the growing integration of the European and national administrative levels, it is problematic that neither the EU directives nor the transparency regulation (Regulation 1049/21/EC) give citizens a right to access information on EU-related activities by the (national authorities of the) member states.<sup>72</sup> Moreover, the member states can refuse without giving reasons to allow the Commission to make public documents originating from them, which have, for example, been exchanged within the European network.<sup>73</sup> The European Ombudsman, in a response to the Commission’s Transparency Green Paper, rightly states in this connection that, “The lack of congruence between

how authority is exercised and how it is made accountable constitutes a serious weakness in the democratic structure of the Union".<sup>74</sup>

#### 4.5.3 LEGAL ACCOUNTABILITY

In addition to the importance of procedural and transparency safeguards, it is also important that stakeholders have access to adequate legal protection at European and/or national level against actions by the European networks which directly impinge on their interests.

However, owing to the present hybrid status of the EU networks and the less than total clarity regarding the legal effects of their activities, the issue of legal protection against their actions becomes something of a grey area.<sup>75</sup> Appealing directly to the European Court of Justice against the actions of the networks is complicated because they do not meet the admissibility conditions of Article 230 EC, for three reasons. First, the actions of the networks do not originate from an EU institution. Nevertheless, under certain circumstances it could be argued that the activities of the networks can be attributed to the European Commission in cases where the Commission has been closely involved in the drawing up of certain documents. Even then, however, stakeholders would come up against two other admissibility requirements as set out in Article 230 EC. European policy rules or recommendations by the networks can probably not be appealed because they are non-binding and therefore do not meet the condition of being actions intended to produce legal effects vis-à-vis third parties.<sup>76</sup> A problem in the ECN is that the deliberations between the Commission and the national authorities are not public. If an agreement is reached within the ECN on the authority or authorities that will deal with a particular case, this does not result in an official decision by the ECN against which an appeal can be lodged pursuant to Article 230 EC.<sup>77</sup> The third admissibility problem relates to the interpretation by the Court of Justice of the 'direct and individual concern' criterion in Article 230 EC, making it difficult for stakeholders to lodge an admissible Article 230 appeal against all measures of a general nature originating from the European networks or the Commission, including European policy rules, regulations and comitology guidelines.<sup>78</sup> The Commission can thus ultimately convert the recommendations of the ERGEG into binding comitology guidelines. Because of the present interpretation of the 'direct and individual concern' criterion by the Court, it will be particularly difficult for competitors of the regulated parties to launch an admissible appeal pursuant to Article 230 against the comitology guidelines.<sup>79</sup>

The foregoing brings us to the problem that the gap in legal protection against policy rules, positions and the recommendations formulated by the European networks can also not be compensated for by legal protection against actions by the Commission in which the policy rules or recommendations of the European networks are incorporated; the legal protection against different actions by the Commission also falls into a grey area.<sup>80</sup> For example, it is unclear in many cases whether an appeal can be lodged against vetoes by the Commission<sup>81</sup> or against

comments or serious doubts by the Commission with respect to national decisions.<sup>82</sup> For stakeholders, the last remaining option will therefore often be to lodge an appeal with the national courts against the national decisions in which the policy rules of the European networks (or the comitology guidelines of the Commission) are ultimately applied. The next section analyses the extent to which the national courts can currently offer legal protection in such cases.

#### 4.5.4 THE ROLE OF THE NATIONAL COURTS

The national courts test national decisions in which the policy rules of the European networks are applied by the national regulatory authorities. Pursuant to Article 10 EC, in assessing the decisions the national courts must interpret national legislation in the light of the relevant directives and must give precedence to directly effective European law, such as directly effective provisions and regulations.<sup>83</sup> Partly in the light of the case-law of the European Court of Justice and the Administrative Law Division of the Dutch Council of State, Article 10 EC and the specific European obligations concerning co-operation by the national authorities as discussed earlier (see section 3.2.), it is argued that the national courts must also take account of policy rules or positions of the European networks relating to the interpretation and application of European law. However, since we are dealing with 'soft-law' documents here and the democratic legitimacy of the actions of the networks is limited, the obligation for the national courts is not so far-reaching that they must apply the policy rules directly or must interpret national legislation as far as possible in accordance with those policy rules. It is more the case that the policy rules and the recommendations of the networks are a factor in the interpretation of European law (and national law which implements European law), which plays a role alongside other factors.<sup>84</sup> This was also the path followed by the Dutch Trade and Industry Appeals Tribunal (CBB) in the LUP case with regard to the significance that the DTe (Dutch Energy regulator) could attach to the arrangements made in the Florence Forum.<sup>85</sup> If the national regulatory authorities adequately explain why they have or have not taken account of the policy rules of the European networks, this should be sufficient for the national courts.

The fact that the national courts must take account of policy rules of the European networks does not mean they lose their independence in the interpretation and application of European law. In an appeal against decisions by the national authorities, the national courts, as is the case with national policy rules, will have to *disapply* European policy rules by way of exception in the event of a conflict with European law. In addition, the courts will have to assess whether the national authorities, due to special circumstances, were justified in deviating from the European policy rules. However, where the networks formulate a document following extensive consultation procedures, and where those documents are fairly definitive in their wording and have been ratified by the European Commission, it will in practice not be easy for the national courts to judge whether the policy rules are fair and entail a balanced weighing of interests.<sup>86</sup>

Moreover, the courts will attach a good deal of importance to the views of the Commission, since the latter can ultimately assume definitive powers to enforce the policy rules. The Masterfoods judgement shows that the national courts must in principle respect Commission decisions.<sup>87</sup> If they doubt the validity of those decisions, the national courts must submit a reference for a preliminary ruling on the validity to the European Court of Justice. In any event, it is hoped that in cases of doubt the national courts will not be afraid to request a preliminary ruling from the European Court of Justice, which ultimately has the last word on the correct interpretation of European law. Unfortunately, owing to the length of time taken by this latter procedure and the need for rapid settlement of disputes in dynamic sectors, this is usually not seen as the most appropriate route.

Based on the foregoing, it may be observed that there are doubts as to whether the national courts can in practice offer adequate legal protection against European policy rules and recommendations of the European networks of national regulatory authorities, and whether they can compensate for the gap in legal protection at the European level. Nonetheless, some national courts have recently shown that they are not afraid to subject decisions of national authorities on which the European Commission had no comments (read: no objections) to in-depth scrutiny.<sup>88</sup> The national courts of the member states could also be encouraged through these rulings to look critically at the actions of the European networks in the assessment of national decisions. This trend is to be welcomed from the perspective of effective legal protection, but could mean that national courts in the member states hand down conflicting rulings on the lawfulness of the actions of the networks.

In the present situation, the possibility that the national courts can *disapply* comments by the Commission or policy rules of the European networks when assessing national decisions constitutes a weak link in the drive for coherence and co-ordination. If in the future the ‘networks plus’ acquire the power to take binding decisions, the role of the national courts will change in some respects (see section 6.3.).

## 4.6 THE FUTURE

### 4.6.1 TOWARDS ‘EUROPEAN NETWORKS PLUS’

The European Commission and the national authorities have observed that the present informal character of European networks, partly because of the consensus-driven decision-making process and the lack of enforcement powers, does not lead in all respects to a uniform and effective application of European law in the member states.<sup>89</sup> For example, the Remedies Position of the ERG failed to make an adequate contribution to the consistent imposition of remedies on undertakings which are designated by the various national telecommunications authorities as having Significant Market Power for the implementation of the electronic communications directives.<sup>90</sup> There is also the problem that the

national regulatory authorities from the different member states are not able to co-operate effectively if a lack of equivalent powers and/or a difference in independence means they are unable to comply with European agreements.<sup>91</sup> The problems highlighted earlier relating to the political and legal accountability of the present European networks continue to receive too little attention and are pushed to the background in the discussions by the Commission on the possibilities for improving convergence in the application of European law by the national authorities.

The Commission has asked the European networks for advice on their future and on the safeguards for an effective application of European law.<sup>92</sup> In the first place, the Commission has emphasised that effective application of European law requires that the independence of the national authorities vis-à-vis the political system be reinforced. In addition, the Commission has included the options to expand its own monitoring powers vis-à-vis the national authorities, the founding of an EU independent agency and the strengthening of the role and powers of the European networks. The national regulatory authorities (and the member states) take a sceptical stance on the first two options, because they would lose their powers to the Commission and/or to an EU independent agency.<sup>93</sup>

However, there is support among the national authorities for the further development of the role and powers of European networks, in the form of a sort of 'European network plus'.<sup>94</sup> This would mean that the European networks would be given the power to co-ordinate the application of European law by the national authorities, for example through the adoption of binding guidelines.

### ***What form might it take?***

The European Commission has recently followed the advice of the ERGEG by proposing that the role of the ERGEG be strengthened through the founding of an EU independent agency for the co-operation between energy regulators.<sup>95</sup> Decisions would be taken by a Board of Regulators, in which the national regulatory authorities are represented. The powers and autonomy of the national authorities would be harmonised in amended energy directives. According to the Commission, the new agency would not have normative powers, but would only be authorised to undertake technical implementation measures.<sup>96</sup> Among other things, it would have the power to oversee the creation of European safety standards and technical conditions for the management, maintenance and development of the European energy networks (European Grid).<sup>97</sup> The safety standards and technical conditions would be proposed by the European associations of national administrators of transmission networks (ETSoplus and GIEplus), whose position would be embedded in amended Regulations. If the European agency feels that the proposals are in accordance with the interests of the internal market, this would constitute implicit approval. If the proposals are not in accordance with the interests of the internal market, or if the European associations of national network administrators fail to put forward proposals, the EU-independent agency could bring in the Commission, which could make the guidelines binding via the comitology process.

An Administrative Board (AB), consisting of an equal number of representatives from the member states and from the Commission, is responsible for the management of the EU-independent agency, including the adoption of the budget and staff salaries. A Director is charged with the day-to-day management and representation of the agency in legal proceedings. In principle, a petition for the annulment of the decisions of the agency can be lodged with the European Court of Justice. However, owing to the length of time such procedures can take and the technical nature of the problems that may be involved, an appeal to the Court will be preceded by an internal appeals procedure held before an Appeals Board. The Appeals Board will comprise six independent people with a high degree of expertise in regulatory matters.

### ***EU independent agencies***

Despite the resistance from the national regulatory authorities, the reality is that the European networks in the 'European networks plus' model proposed by the Commission are evolving into EU-independent agencies. The ERGEG and the Commission have taken account of the Meroni judgement by drawing a distinction between decisions which contribute to the development of the European *acquis* (normative decisions) and decisions which implement the *acquis* (technical decisions).<sup>98</sup> Decisions in the former category are prepared by the 'European agency as network plus', but ultimately have to be approved by the Commission through application of the Comitology Decision. Decisions in the second category can be taken by the European agency itself.

However good such a distinction may sound in theory, in the practice of economic and social regulation the distinction between policy and implementation is difficult to make.<sup>99</sup> The complexity of social and economic problems and the rapidly changing social, economic and technological climate mean the legislator has to work with sufficiently open norms in order to guarantee effective implementation of the legislation.<sup>100</sup> Even where decisions appear to be purely concerned with implementation, the complexity of the economic and legal analyses that have to be performed, and the potentially conflicting interests of the different stakeholders, mean that an implementing authority will often have to make choices. Consequently, the proposed structure could give rise to a lack of clarity on the boundary between the powers of the Commission and those of the 'European agency as network plus'.

### ***Relationship between 'European agency as network plus' and national authorities***

The national authorities play a complementary role vis-à-vis the 'European agency as network plus'. In addition to their national responsibilities, they are obliged to respect the European interest in exercising their powers. To ensure that they promote that interest in an objective way, the independence of the national authorities vis-à-vis the political system must be strengthened in a harmonised way. The ERGEG and the Commission make virtually no effort to explain in detail what the obligation to respect the European interest should be

taken to mean. The possibility is, moreover, not ruled out that national authorities will be confronted with a substantive conflict between the European interest and the national interest of the end users in the national market concerned. The example of the ‘gas roundabout affair’ of the DTe, for instance, showed that it can, on the one hand, be in the European interest that the transport of gas through the Netherlands is encouraged as much as possible and that the Dutch consumer should help pay for the investments in the transport network needed to achieve this. On the other hand, however, it may be in the national interest for the consumer not to be confronted with increases in end-user tariffs.<sup>101</sup> This also begs the question of who decides which interest should be decisive: the Commission, the ‘European agency as network plus’, the European Parliament and/or the national parliaments? How should the national regulatory authorities deal with such a substantive conflict of interest? In any event, the Commission is in favour of a further extension of its *ex ante* monitoring powers, which enable it to block national decisions that frustrate the completion of the internal market.

#### **4.6.2 DOES MERONI POSE AN OBSTACLE TO ‘EUROPEAN AGENCIES AS NETWORK PLUS’?**

A relevant legal question here is whether Meroni runs contrary to the development of European agencies with binding (regulatory) powers. It is argued that there is legal scope for such a development. In the first place, it should be stressed that the double delegation by the Commission and the national authorities to the ‘European agency as network plus’ is different from the situation in the Meroni case, where the Commission delegated its discretionary powers to a private-law body.<sup>102</sup> By contrast, under the present proposal the Commission will retain its policymaking powers but, like the national authorities, will delegate the co-ordination and implementation of European and national policy by the national authorities.<sup>103</sup>

Nonetheless, it became clear that the ‘European agencies as network plus’ are also hybrids to some extent, precisely because the Commission wishes to take account of Meroni and the proposed distinction between policy and implementation (and the demarcation of powers between the Commission and the European agencies) is not clear in practice. However, the fact that this distinction is difficult to make in practice need not mean that no regulatory powers can be delegated to the ‘European agencies as network plus’. It is argued that the legal scope exists for the delegation of powers with a certain degree of freedom of choice to EU independent agencies.

It is worth remembering at this juncture that at the heart of the Meroni judgement lies the fact that European institutions may not disrupt the institutional balance through the delegation of powers. The purpose of institutional balance is to safeguard a system of checks and balances between the EU institutions, so that the different institutions respect each other’s powers, co-operate with each other and do not abuse their powers.<sup>104</sup> Institutional balance is a dynamic rather than a static concept. Social developments and changing political ideas on how integra-

tion within the EU should take place can lead to shifts in the way in which the EU institutions keep each other in check.<sup>105</sup>

Everson also argues that the concept of non-delegation and the Meroni doctrine are based on normative constitutional views about the structure of the EU, such as the principle of separation of powers, the principle of representative democracy and the associated vertical accountability mechanisms, which are known not to correspond with the way that the administration within the EU currently functions in practice.<sup>106</sup> In modern democracies, the delegation of powers is based on a single delegation chain with several links, from the democratically elected parliament to the minister and to the civil servants.<sup>107</sup> The example of the double delegation of powers at the national and European levels to the European networks (plus), shows, however, that this operates differently at EU level (see section 5.1.). Curtin argues in this connection, 'It rather seems, that at the European level, we are forced to consider multiple chains of delegation with multiple links, largely because it is not the legislature that is both directly connected to the voters, and at the same time, delegating its powers'.<sup>108</sup> In a situation such as this, purely vertical accountability mechanisms like those with which we are familiar in the parliamentary democracies of the member states (such as the principle of ministerial accountability) are no longer adequate. Consideration also has to be given to supplementary horizontal accountability mechanisms in which the European agencies render account to stakeholders,<sup>109</sup> and to mixed accountability mechanisms in which European and national accountability forums work together.<sup>110</sup>

With an increasingly politicising European Commission, EU-independent agencies reflect the will of the European legislator to curtail the influence of politicians in the implementation of legislation and policy in order to protect certain interests, such as the promotion of the internal market.<sup>111</sup> Given the often vague dividing line between policy and implementation, but also in order to guarantee the fruitful exercise of power, the EU-independent agencies require and possess a freedom of choice. They do, however, have to continually justify their choices, and administrative procedures cannot therefore be focused purely on good implementation of the law, but must also guarantee that the agencies make legitimate choices in the sense of a balanced weighing of conflicting interests. The statutory embedding of provisions on public stakeholder consultations and transparency can make a (limited) contribution in this regard.<sup>112</sup>

In addition to adequate procedural and transparency safeguards, other checks and balances can also foster legitimacy in the performance of tasks. According to Curtin, a number of existing agencies serve as a development and learning framework for the new accountability practices, which could eventually be rolled out across the whole spectrum of the EU administration.<sup>113</sup> Some of these practices are also found in the proposals of the Commission and the ERGEG. They involve an interplay of accountability practices, which result in the agency feeling genuinely bound to render account to a forum and facing consequences if it does not

perform its task adequately. Examples include the rendering of account by the director of the agency to the European Parliament, financial audits (with budgetary authority for the EP in the case of Community funding), appeals lodged with an independent Appeals Board and judicial control exercised by the European Court of Justice. Reference can also be made to selection and appointment instruments, checks and balances by the European Ombudsman and the control function of OLAF (European Anti-Fraud Office).

#### 4.6.3 SOLUTION OR NEW ACCOUNTABILITY PROBLEMS?

##### *Still hybrid, just a different form*

The double delegation of powers by the European Commission and national governments means that the ‘European agencies as network plus’ remain hybrids to some extent. However, it is doubtful whether this hybridity is the same as in the current network arrangements, in which the networks and the Commission focus on effective ways of co-ordinating the national implementation of European legislation and of guaranteeing a coherent approach among the 27 member states. In this regard, the present network arrangements can be described as a mix of vertical and horizontal co-ordination, between the Commission and the national regulatory authorities, on the one hand, and between the different national regulatory authorities, on the other. The ‘European agency as network plus’ model can also be described as a hybrid in the sense that national and European powers are combined, but if the proposals are implemented, that hybridity can become more complex. From a procedural point of view, the proposed ‘European agency as network plus’ model at first sight appears to create a shift towards more centralised powers for the adoption of at least technical standards at European level. However, it is also expected that the regulatory powers for certain aspects of the network sectors, particularly economic aspects such as tariffs, will remain with the national regulatory authorities. It is not easy in practice to separate the technical and economic aspects of powers, so that regulation by the ‘European agency as network plus’ will remain a hybrid of national and European powers. At the same time, it is not always possible in such a situation to establish the political and legal accountability for the outcomes of the new mixed arrangements.

There are also procedural uncertainties regarding the dividing line between the powers of the Commission and those of the ‘European agencies as network plus’ on account of the vague distinction between policy and implementation and the attempts by the Commission to circumvent Meroni. Substantive problems can arise because the ‘European agencies as network plus’ and the national authorities may be confronted with conflicting European and national interests. The proposals do not make it clear who is responsible for what, how conflicts of interest should be dealt with and how accountability should be ensured. This means that in the new situation of double delegation the accountability gaps will remain. A continuing problem is that the European Parliament can in principle call the Commission and the European agencies to account, while the national

parliaments cannot summon a Commissioner or a director of a European agency to demand an explanation of the way in which the powers delegated by the national authorities have been exercised. One solution could be the setting up of a mixed parliamentary commission consisting of members of the European Parliament and the national parliaments, to which the Commission and the directors of the ‘European agencies as network plus’ are accountable for the exercise of the tasks and powers delegated to them.

### ***Effective legal protection***

As regards the right to effective legal protection of stakeholders, it is very important to be able to identify at which level – European agency or national regulatory authorities – which decision has been taken. Given the observed hybrid nature of the ‘European agency as network plus’ model, it may be unclear whether a stakeholder should appeal to the European Court of Justice or the national courts.

In the proposed model, it is possible in principle to appeal to the European Court of Justice against binding decisions by a European agency. However, the difficulty is that the interpretation by the Court of ‘direct and individual concern’ in Article 230 EC means it will be difficult for most stakeholders, especially those who are not directly addressed by technical decisions or who do not hold a special procedural position, to lodge an admissible appeal against measures of a general nature or decisions addressed to another party (see section 5.2). It is therefore advisable not only to strengthen the position of the regulated market players, but also to put in place procedural safeguards so that other stakeholders, including the consumer, can be heard and have access to adequate legal protection. One possibility might be the creation of a European consumer organisation, to which special procedural and appeal rights are delegated.<sup>114</sup>

In the ‘European agency as network plus’ model, the role of the national courts will also change. Procedurally, the courts will not only be confronted with European policy rules from the agencies, but also with binding decisions. The national courts will in principle have to uphold binding decisions by European agencies. On a substantive level, the courts could be faced with conflicts between the European interest and the national interest. A crucial aspect for the uniform application of European law is the question of how the national courts will deal with this in the future.

Where there are doubts about the validity or correct interpretation of rules or decisions by the ‘European agency as network plus’, it is recommended that the national courts submit a request for a preliminary ruling to the European Court of Justice. However, decisions by a European agency, for example in relation to a veto of a particular national decision relating to the interpretation of national versus European interests, can also lead to complicated questions. It is questionable whether stakeholders will still be able to lodge an appeal against a national implementation decision to the national courts and whether they will be able to request that the national courts submit a request for a preliminary validity ruling in cases

where the European agency uses its veto against a national decision and adopts its own position in a weighing of interests.<sup>115</sup> Recent case-law from the Court of Justice concerning the relationship between the Commission and the national competition authorities indicates that problems could indeed arise. In case C-53/03, for example, the Court took the view that the Greek competition authority was not authorised to submit a request for a preliminary ruling to the Court after the Commission had decided to take over the case.<sup>116</sup> On the analogy of this ruling it could be argued that the ‘European agency as network plus’, by taking a decision in relation to a weighing of interests, could achieve the same result: the national authorities would lose the power to take decisions of a legal nature and the Court would as a consequence have no power to meet requests for a preliminary ruling.<sup>117</sup>

### **Accountability networks**

In addition to the proposed solutions in the form of mixed parliamentary commissions and the attribution of special procedural rights and legal protection guarantees to a European consumer organisation, there are other ways of strengthening the accountability of the ‘European agencies as network plus’ in a situation of double delegation. The idea put forward by Harlow and Rawlings, namely that “a partial answer to the acknowledged problems of network governance may lie in the construction of ‘accountability networks’”,<sup>118</sup> could serve as a source of inspiration here. The competent national courts in the liberalised sectors could form a ‘network of accountability’ and intensify their co-operation by exchanging information on rulings, organising joint training initiatives and aiming for a uniform approach to the weighing of European and national interests in assessing national decisions.<sup>119</sup> Harlow and Rawlings also point to the co-operation between the European Ombudsman and the national ombudsmen in a developing European network of ombudsmen, which is striving to develop standards of good governance, information exchange, the setting up of a European complaints system and, in the future, the carrying out of joint investigations of *maladministration* in the co-operation between European and national organisations.<sup>120</sup>

## **4.7 CONCLUSION**

In light of the Meroni judgement, it might be tempting to see the creation of an EU-independent agency with regulatory powers in the form of a ‘European network plus’ as a real revolution. In reality, however, the establishment of ‘European agencies as network plus’ can be seen more as the formalisation of a trend in which, through hybrid governance structures, actual influence is exerted on the rights and obligations of stakeholders. Formalising the role of the European networks in the form of ‘European agencies as network plus’ transforms the informal *de facto* influence of the European networks into formal regulatory powers which can impinge directly on the rights and obligations of stakeholders. This formalisation should make it possible to create greater clarity regarding the different European and national responsibilities and the political and legal accountability of the ‘networks plus’.

In reality, however, the double delegation of powers by the Commission and the national authorities, and the attempts by the Commission to stick rigidly to the distinction between policy and implementation, mean the proposed 'European agencies as network plus' and their actions will continue to be characterised by a certain hybridity. This hybridity is different from that in the present network arrangement, and marks a grey area concerning the demarcation of European and national powers and potential conflicts, which could arise in the interpretation of European and national interests. If it is not transparent who ultimately makes a decision in areas where clarity is needed and how they are held accountable for this, accountability gaps will remain in the proposed 'European agencies as network plus' scenario. In its recent proposals for the further fleshing out of the 'European network plus' model in the energy sector, the European Commission has paid virtually no attention to the demarcation of European and national responsibilities, nor to the question of which accountability mechanisms are appropriate in a situation of double delegation to a 'European agency as network plus'. The European legislator needs more than mechanisms for democratic control by the European Parliament and legal control by the European Court of Justice. The national parliaments must also be able to monitor effectively how the delegated national powers are exercised at the European level. In addition, consideration needs to be given to the role of the national courts, which must be able to provide effective legal protection when assessing whether the national authorities have weighed conflicting European and national interests in a balanced way. It would therefore seem to be inevitable that in a double delegation scenario, the Commission will devote more attention to the creation and detailing of mixed accountability mechanisms, in which representatives of the European and/or national accountability forums have a place, for example in a mixed parliamentary commission, a European network of ombudsmen and a network of national courts.

## NOTES

- 1 Dr. Saskia Lavrijssen-Heijmans has been Senior Lecturer in Economic Public Law at the Europa Instituut of Utrecht University in the Netherlands since September 2007. She began work on this article in her position as a university lecturer in competition law and as a researcher at the Tilburg Law and Economics Center (TILEC) at Tilburg University.
- 2 Leigh Hancher is Professor of European Law at Tilburg University, a member of the Netherlands Scientific Counsel for Government Policy WRR and counsel at Allen & Overy in Amsterdam.
- 3 See, e.g., Article 3 of Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive), OJ 2003 L 108/33, Article 23 of Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC, OJ 2003 L 176/37 and Article 25 of Directive 2003/55/EC Directive 2003/55/EC, OJ 2003 L 176/57.
- 4 See Article 8 of Regulation 1228/2003/EC of the European Parliament and of the Council of 26 June 2003 on conditions for access to the network for cross-border exchanges in electricity, OJ 2003 L 176/1. See also Article 9 of Regulation 1775/2005 of the European Parliament and of the Council of 28 September 2005 on conditions for access to the natural gas transmission networks, OJ 2005 L 289/1.
- 5 See Articles 15 and 16 of Directive 2002/21/EC.
- 6 See Articles 7, para 5 and 15, para 3 of Directive 2002/21/EC, Article 23, para 12 of Directive 2003/54/EC, Article 25, para 12 of Directive 2003/55/EC and Articles 11, 15 and 16 of Council Regulation 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, OJ 2003 L 1/1.
- 7 See Article 7, para 3 of Directive 2002/21/EC and Article 11, para 3 and para 4 of Council Regulation 1/2003.
- 8 Article 7, para 4 and 5 of Directive 2002/21/EC. For comparable powers of the Commission, see also Article 27 of Directive 2003/55 EC and Article 7 of Council Regulation 1228/2003/EC.
- 9 Article 11, para 6 of Council Regulation 1/2003.
- 10 Commission Decision 2003/796/EC of 11 November 2003 establishing the European Regulators Group for Electricity and Gas, OJ 2003 L 296/34.
- 11 Commission Decision 2002/727/EC of 29 July establishing the European Regulators Group for Electronic Communications Networks and Services (ERG), OJ 2002 L 200/38, as amended by Commission Decision 2004/3445/EC of 14 September 2004, OJ 2003 L 296/34.
- 12 Commission Notice on Co-operation within the Network of Competition Authorities, OJ 2004 C 101/43.
- 13 See the Commission Decision of 6 June 2001 establishing the Committee of European Securities Regulators, OJ 2001 L 191/43.

- 14 For a detailed discussion, see R. van Ooik, 'The Growing Importance of Agencies in the EU: Shifting Governance and the Institutional Balance', in: D.M. Curtin and R.A. Wessel (eds.), *Good governance and the European Union, Reflections on Concepts, Institutions and Substance*, Antwerp-Oxford-New York: Intersentia 2005, p. 134.
- 15 See <http://erg.eu.int/>, <http://www.ergeg.org> and [http://ec.europa.eu/comm/competition/ecn/index\\_en.html](http://ec.europa.eu/comm/competition/ecn/index_en.html).
- 16 The proposal of 18 September 2007 was published at: [http://ec.europa.eu/energy/electricity/package\\_2007/doc/2007\\_09\\_19\\_acer\\_regulation\\_en.pdf](http://ec.europa.eu/energy/electricity/package_2007/doc/2007_09_19_acer_regulation_en.pdf).
- 17 for a detailed conceptual analysis of the notion of accountability, see: M.B. Bovens, 'Analysing and Assessing Public Accountability. A Conceptual Framework', *European governance papers*, no. C-06-01. Bovens sees accountability 'as a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgement and the actor may face consequences'.
- 18 G. Mojave, 'The Credibility Crisis of Community Regulation', *Journal of Common Market Studies* 2000 no. 2, p. 295. For a detailed analysis of the position and tasks of EU independent agencies, see E. Vos, 'Agencies and the European Union', in: L. Verhey and T. Zwart (eds.), *Agencies in European and Comparative Perspective*, Antwerp-Oxford-New York: Intersentia 2003, p. 113.
- 19 Van Ooik 2005, p. 132-137.
- 20 Van Ooik 2005, p. 135 ff.
- 21 Regulation 726/2004 of the European Parliament and of the Council of 31 March 2004 laying down Community procedures for the authorisation and supervision of medicinal products for human and veterinary use and establishing a European Medicines Agency, *OJ* 2004 L 136/1.
- 22 The literature also distinguishes between 'information agencies' and 'management agencies'. For a further categorisation of EU-independent agencies, see, R. Dehousse, 'EU law and the Transformation of European Governance', in: C. Joerges and R. Dehousse (ed.), *Good governance in Europe's Integrated Market*, Oxford: Oxford University Press 2002, p. 218 and E. Vos 2003, p. 119-122.
- 23 Dehousse 2002, p. 223.
- 24 European legislation leaves the detailed design and functioning of the networks to the Commission. The preambles of the relevant legislation merely contain a consideration that the Commission shall or must set up a European network; see, for example, consideration 36 of Directive 2002/21/EC and consideration 15 of Regulation 1/2003.
- 25 L. Hancher, 'The Regulatory Role of the European Union', in: H. Kassim and A. Menon (eds.), *The European Union and National Industrial Policy*, London: Routledge 1996, p. 60.
- 26 Vos 2003, p. 113-114, Mojave 2000, p. 290, E. Vos, 'Independence, Accountability and Transparency of European Regulatory Agencies', in: D. Geradin, R. Muñoz and N. Petit, *Regulation through Agencies in the EU, a New Paradigm of Governance*, Cheltenham: Edward Elgar 2005, p. 120-137, D. Geradin and N. Petit, 'The Development of Agencies at EU and National Levels: Conceptual Analysis and

- Proposals for Reform', Jean Monnet Working Paper 01/04, Dehousse 2002, p. 223-229. See also A. Sapir et al., *An Agenda for a Growing Europe*, Oxford: Oxford University Press 2004, p. 184-185.
- 27 EJC 13 June 1958, case 9/56, Meroni, *Jur.* 1958, p. 1. See on this case K. Lenaerts, 'Regulating the Regulatory Process': 'Delegation of Powers' in the European Community', *European Law Review* 1993, no. 18, p. 41 and K. Lenaerts and A. Verhoeven, 'Institutional Balance as a Guarantee for Democracy in EU Governance', in: C. Joerges and R. Dehousse (eds.), *Good Governance in Europe's Integrated Market*, Oxford: Oxford University Press 2002, p. 44-45.
- 28 Dehousse 2002, p. 222. According to Dehousse, the Meroni case represents an exceptional situation, because it was concerned with the delegation of discretionary powers by an EC institution to a private-law institution. In the EU context the situations are generally different, in the sense that implementing powers of the member states are as it were transferred to EU agencies. As a result, the concept of delegation which was at issue in Meroni is not easily applicable to situations where national powers are as it were being transferred to 'Europe'.
- 29 Dehousse 2002, p. 222-223, Geradin and Petit 2004, p. 13-16 and M. Everson, G. Mojave, L. Metcalfe and A. Schout, *The Role of Specialised EU Agencies in Decentralising EU Governance*, report presented to the Commission 1999, p. 26-28.
- 30 Geradin and Petit 2004, p. 13.
- 31 For a detailed discussion, see Lavrijssen-Heijmans 2006, p. 381 ff.
- 32 See Commission Decision of 6 June 2001 establishing the Committee of European Securities Regulators, *OJ* 2001 L191/43. For an analysis of the regulatory model in the financial sector, see: N. Moloney, 'New Frontiers in EC Capital Markets Law: From Market Construction to Market Regulation', *CMLRev* 2003, no. 4, p. 810.
- 33 See Article 8 of Regulation 1228/2003/EC, Article 9 of Regulation 1775/2005 and Articles 5, 7 and 8 of Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission, *OJ* 1999 L184/023. The Comitology Decision has recently been amended and a new procedure (regulatory procedure with scrutiny) introduced which has considerably increased the powers of the European Parliament by giving it a right of veto. See Article 5a of Council Decision 2006/512/EC of 17 July 2006 amending Decision 1999/468/EC, *OJ* 2006 L 200/11.
- 34 In the Grimaldi case the Court considered that the national courts must take account of Commission recommendations which clarify and supplement European law in order to settle disputes placed before the Court. EJC 13 December 1989, case C-322/88, Grimaldi, *Jur.* 1989, p. 1-4407. For a discussion of this case see: L.A.J. Senden, *Soft law in European Community law*, Oxford: Hart 2004, p. 386-393. It also follows from the jurisprudence of the Court of Justice that the national competition authorities and the national courts, pursuant to Article 10 EC, and the special role of the Commission in the formulation of Community competition policy, must take as full account as possible of the way in which the Commission interprets and applies Articles 81 and 82 EC. See EJC 13 January 1969, case 14-68, Walt Wilhelm, *Jur.* 1969, p. 1 and EJC 14 December 2000, case C-344/98, Masterfoods, *Jur.* 2000, p. 1-11369, annotated by K.J.M. Mortelmans

and M.G. Wezenbeek-Geuke, *SEW* 2002, no. 3, p. 107-110. Also relevant is the fact that the obligation pursuant to Article 10 EC for co-operation between the Commission and the national authorities is worked up into specific provisions in the European directives and in Council Regulation 1/2003. Pursuant to Article 10 EC and the specific European co-operation obligations under the European directives and Council Regulation 1/2003, the national authorities must take account of policy rules of the European Commission. See also Lavrijssen-Heijmans 2006, p. 343-344.

35 See Articles 15 and 16 of Directive 2002/21/EC.

36 According to Article 7, para 3 of Directive 2002/21/EC, a national regulatory authority must consult with the Commission and the other national authorities in the event of certain draft decisions which have a material influence on the trade between the member states. According to Article 7, para 5 of Directive 2002/21/EC the national regulatory authority must take the utmost account of the comments of the other national regulatory authorities and the Commission. Pursuant to Article 11, para 4 of Regulation 1/2003, a national competition authority must inform the Commission of a draft decision. The national authority may also submit the decision to the other members of the ECN.

37 For an overview of the nature of the activities of CESR, see: CESR, 'The Role of CESR at 'level 3' under the Lamfalussy Process, Action plan for 2005', CESR/O4-527b, October 2004.

38 Pursuant to Article 11, para 3 of Regulation 1/2003, the national authorities must notify the other members of the network without delay after the start of the first formal investigative measure of their intention to carry out an investigation. See also Commission Notice on co-operation within the Network of Competition Authorities, OJ 2004 C 101/43, section 3.

39 This co-ordination takes place first and foremost on the allocation phase or when a national authority informs the Commission of a draft decision pursuant to Article 11, para 4 of Regulation 1/2003. The national authority may also submit the decision to the other members of the ECN. Experience with the treatment of actual cases leads to the development of a policy practice and results in 'regulatory convergence'. In addition, general discussions take place within the ECN on topics concerning competition law and sectors and the authorities co-operate in the Advisory Committee described in Article 14 of Regulation 1/2003.

40 See footnote 34. The duty of the national authorities to take account of the European policy rules is not absolute. The national authorities may deviate from the policy rules on several grounds, for example because their application in a specific case would have disproportionate consequences. Senden 2004, pp. 434-436 and p. 488.

41 ERGEG, 'Guidelines on Congestion management', 18 July 2005. These guidelines flesh out the Regulation principles and guidelines in relation to the management and allocation of transport capacity in the cross-border networks (interconnectors).

42 This Committee consists of representatives of the member states. Depending on the topic, the responsible ministries can decide whether a representative of a ministry or a representative of the national authority takes part in the Commit-

- tee. The idea is that the Ministry of Economic Affairs is represented during votes on topics with policy aspects, while the Office of Energy Regulation (DTe) can take part in the Committee for votes on more technical matters. During the ballot on the adoption of the guidelines for congestion management a vote was cast by a representative of the DTe.
- 43 Commission Decision 2006/770/EC of 9 November 2006 amending the Annex to Regulation (EC) No 1228/2003 on conditions for access to the network for cross-border exchanges in electricity, OJ 2006 L 312/59.
- 44 See, e.g., ERGEG, 'Obstacles to Switching in the Gas Retail Market, Guidelines of Good Practice and Status Review', Ref: E06-CSW-05-03, 18 April 2007, ERGEG, 'Guidelines for Good Practice and Open Season Procedures (GGPOS)', Ref: C06-GWG-29-05C, 21 May 2007, ERGEG, 'Guidelines of Good Practice for Gas Balancing (GGPGB)', ERG, 'Common Position on Best Practice in Wholesale Unbundled Access (including shared access)' and ERG (06)70Rev1, ERG, 'Common Position on Best Practice in Bitstream Access Remedies'.
- 45 ERG, 'Revised ERG Common position on the Approach to Appropriate Remedies in the ECNS Regulatory Framework', ERG (06)33.
- 46 Minutes of the Madrid Forum, Joint Working Group, Brussels, 18 March 2005 en ERGEG, 'Guidelines for Good TPA Practice for Storage System Operators (GGSPO)', 23 March 2005.
- 47 See B. Eberlein, 'Regulation by Co-operation: 'The Third Way in Making Rules for the Internal Energy Market': in P. Cameron (ed.), *Legal Aspects of EU Energy Regulation, Implementing the New Directives on Electricity and Gas across Europe*, Oxford: Oxford University Press 2005, pp. 59-88
- 48 See [http://ec.europa.eu/comm/competition/ecn/model\\_leniency\\_en.pdf](http://ec.europa.eu/comm/competition/ecn/model_leniency_en.pdf). The term 'leniency' refers to immunity or reduced penalties for infringements of the competition rules which may be granted to the infringing parties in exchange for information on the infringements to the competent authorities.
- 49 Cf. Section 4:84 Awb.
- 50 EJC 30 March 2000, case C-178/97, Banks, *Jur.* 2000, p. 1-2004 and EJC 2 July 2002, case C-115/00, Hoves, *Jur.* 2002, p. 1-6077.
- 51 See ABRS 10 April 2001, HMG vs. CvdM, *Mediaforum* 2001, no. 6, pp. 209-211 and J. van de Gronden and K.J.M. Mortelmans, 'Holland Media Groep of Luxembourg Media Groep: de trouvaille van de Raad van State', *Mediaforum* 2001, no. 6, pp. 191-200. See also ABRS 6 August 2003, 200203476/1, HMG vs. CvdM and K.J.M. Mortelmans, 'RTL 4 en RTL 5: toch een verwijzing naar Luxembourg', *Mediaforum* 2003, no. 9, pp. 280-287.
- 52 See Article 23, para 12 of Directive 2003/54/EC, Article 25, para 12 of Directive 2003/55/EC, Article 7 of Directive 2002/21/EC and consideration 15 of the preamble to Regulation 1/2003.
- 53 See also Senden 2004, pp. 442-446.
- 54 On the scope for applying these articles in liberalised sectors, see: Lavrijssen-Heijmans 2006, pp. 329-340. Based on its traditional Treaty powers, the Commission cannot exert a direct and principally ex post influence on the way in which the national authorities interpret and apply European law.
- 55 The seventh Madrid Forum for example, encouraged by the Commission and

following extensive stakeholder consultation, adopted the revised version of the Guidelines on Good TPA Practice' (Conclusions of the 7th meeting of the European Gas Regulatory Forum, Madrid, 24-25 September 2003). Although these guidelines cannot impose binding obligations on market players, the Commission and the ERGEG verified whether network administrators were complying with them. Owing to the deficient application in practice, the Commission ultimately embedded the guidelines in Regulation 1775/2005.

- 56 See the Commission Decision of 20 February 2004, case F1/2003/0024 and F1/2003/0027: publicly available international telephone services provided at a fixed location for residential and non-residential customers in Finland, Commission Decision of 5 October 2004, case F1/2004/21/EC: access and call origination on public mobile telephone networks in Finland, Commission Decision of 17 May 2005, case DE/2005/0144: call termination on individual public telephone networks provided at a fixed location in Germany and Commission Decision of October 2004, case AT/2004/00900: transit services in the fixed public telephone network in Austria. See Lavrijssen-Heijmans 2006, pp. 360-365.
- 57 European Commission 3 November 2005, case NL 2005/0247: retail markets for the transmission and provision of free radio and television (RTV) services via the cable in the Netherlands, serious doubts. The European Commission also subjected the draft decisions of OPTA on the definition and analysis of the wholesale market for broadband access for the delivery of rapid Internet services to end users to in-depth scrutiny. See European Commission 2 December 2005, case NL/2005/0281: wholesale broadband access in the Netherlands, comments pursuant to article 7 (3) of Directive 2002/21/EC.
- 58 Formally, the Commission has no power to veto the obligations that national authorities wish to impose on companies designated as Material Market Powers. Nonetheless, the Commission has applied and interpreted its power to intervene in national procedures widely. See for example the letter from the Commission of 15 September 2005, cases FR/2005/221 to 2005/0266: retail fixed narrow band access and calls market in France, comments pursuant to Article 7 (3) of Directive 2002/21/EC.
- 59 See the Aptroot Motion, *Kamerstukken II* 2005-2006, 27088, no. 45. For an analysis of the case see also: Lavrijssen-Heijmans 2006, pp. 5-7 and pp. 367-368.
- 60 See European Commission 21 December 2005, case NL/2005/0247: retail markets for the transmission and provision of free radio and television services via the cable in the Netherlands, withdrawal of serious doubts.
- 61 The Inter-institutional Monitoring Group raises this question with regard to the regulatory convergence activities of CESR, see Inter-Institutional Monitoring Group, *Third Report Monitoring the Lamfalussy Process*, Brussels 17 November 2004, pp. 28-32.
- 62 M. Thatcher and D. Coen, 'Reshaping European Regulatory Space: An Evolutionary Analysis', to be published in *West European Politics* 2008.
- 63 This concept is used by D. Coen and M. Thatcher, 'Network Governance and Multi-Level Delegation, European Networks of Regulatory Agencies', to be published in *Journal of Public Policy*, no. 1. In a strict legal sense, delegation often does not occur because the European legislation does not contain explicit princi-

ples for the delegation of powers by the national authorities and the Commission to the European networks. However, the founding of the networks leads to the de facto delegation of powers.

- 64 Article 197 EC.
- 65 Netherlands Court of Audit, 'Toezicht op markten', *Kamerstukken II*, 2004-2005, 29960, nos. 1-2, p. 32.
- 66 Minister of Economic Affairs, 'Visie op markttoezicht', June 2004, p. 4.
- 67 Netherlands Court of Audit, 'Toezicht op mededinging door NMA', *Kamerstukken II*, 2006-2007, no. 1.
- 68 See Curtin 2006: 'Paradise Lost?', in: Europese Integratie, Handelingen Nederlandse Juristen Vereniging, 136<sup>e</sup> Jaargang/2006-1, Deventer: Kluwer 2006, p. 48.
- 69 Curtin 2006, p. 47 and Bovens 2006, p. 13.
- 70 Different networks aim for transparency, as evidenced, among other things, from the websites they have set up and on which they intend to publish as many documents as possible, including agendas for meetings, minutes, annual reports and work plans. See also ERGEG, 'Public Guidelines on ERGEG's Consultation Practices' ([www.ergreg.org](http://www.ergreg.org)) and the ERG document: 'ERG and Transparency in Practice', ERG(03)05rev1 (<http://erg.eu.int>). To date the ECN has been less transparent, but recently it also launched a website: [http://ec.europa.eu/comm/competition/ecn/index\\_en.html](http://ec.europa.eu/comm/competition/ecn/index_en.html).
- 71 With regard to the ERG and the ERGEG, for example, the question arises to what extent Regulation 1049/21/EC applies to their activities (Regulation 1049/2001/EC of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents, OJ 2001 L 145/53). Article 27, para 2, of Regulation 1/2003 prevents parties which are the subject of a Commission procedure from inspecting the correspondence between the Commission and the competition authorities and between the individual competition authorities. The question is what the scope of this provision is and to what extent it can be curtailed in the light of the need to respect the rights of defence of the companies concerned. See also Lavrijssen-Heijmans 2006, pp. 409-410. The European Commission consulted the public on choices for improving the operation of Regulation 1049/2001/EC on the basis of the Green Paper 'Public Access to Documents held by Institutions of the European Community' An Evaluation, COM(2007)185 final. The Commission will table proposals for improvement in the autumn of 2007.
- 72 Response of the European Ombudsman, P. Nikiforos Diamandouros, to the Commission's Green Paper 'Public Access to Documents held by Institutions of the European Community: A Review', 11 July 2007.
- 73 GvEA 30 November 2004, case T-168/02, IFAW Internationaler Tierschutz-Fonds vs. Commission, *Jur.* 2004, p. 11-4135. An appeal has been lodged against this ruling with the European Court of Justice. Article 4, para 5 of Regulation 1049/2001 offers a member state the possibility of requesting an institution not to publish a document originating from a member state without its prior permission, and the option of refusing to give that permission.
74. Diamandouros 2007.
- 75 See also P. Larouche and M. de Visser, 'Key Institutional Issues and Possible

- Scenario's for the Review of the Electronic Communications Framework', TILEC Discussion paper 2005-032.
76. See also Lavrijssen-Heijmans 2006, p. 413 ff.
77. Based on the agreements reached within the ECN, the national authorities can take decisions on the suspension, cessation or initiation of national procedures as well as the transfer of dossiers within the network. According to the European Commission, such national decisions do not create rights, and it considers that appeal against such decisions is not possible. Commission Notice, par. 31. See W. Wils, 'Community report', in: D. Cahill and J.D. Cooke (eds.), *The Modernisation of EU Competition Law, Enforcement in the EU*, FIDE 2004, p. 702 and S. Brammer, 'Concurrent Jurisdiction under Regulation 1/2003 and the Issue of Case Allocation', *CMLRev* 2005, pp. 1416-1418. This assertion is arguable; see Lavrijssen-Heijmans, p. 414.
78. The Court has judged that in principle parties cannot lodge an appeal against measures of a general nature, unless they can demonstrate that the measures in question affect them directly and individually, in the sense that they have the character of an order vis-à-vis them (EJC 25 July 2002, case C-50/00P, Unión de Pequeños Agricultores (UPA), *Jur.* 2002, p. I-4539, annotated by L. Parret and S. Prechal, *SEW* 2003, no. 2, p. 35).
79. It can be argued that the provisions of the comitology guidelines, which have direct consequences for the energy network operators (such as rules relating to tariff structures), have the character of an order vis-à-vis the latter and therefore affect them individually. The guidelines relate to an identifiable group of operators of national gas and electricity transmission networks, which owing to the existence of statutory monopolies and high entry barriers, will not readily increase in size. It will be more difficult for customers and competitors of the network operators to demonstrate that the guidelines affect them individually because they form a larger and more difficult to define group.
80. Lavrijssen-Heijmans 2006, p. 350 ff.
81. Especially the customers and competitors of the regulated market players, as well as the consumer, will encounter admissibility problems because of the limited interpretation of the 'direct and individual concern' criteria by the Court. These groups are after all indeterminate and changeable. In addition, the European regulations accord no specific procedural rights to third parties, something that plays an important role in state aid and competition cases in assessing whether a third party is individually affected by the decision that is directed towards a different entity. See, e.g., EJC 4 March 1999, case C-119/97P, *Ufex*, *Jur.* 1999, p. I-1341 and EJC 28 January 1986, case 169/84, *COFAZ*, *Jur.* 1986, p. 391.
82. Actions in respect of which the Commission makes comments or expresses serious doubts with regard to a decision by a national authority can in principle be regarded as preparatory actions. If the authority in question does not take account of the doubts or comments of the Commission, the Commission can ultimately veto the decision. According to case-law of the Court, there is in principle no legal protection against preparatory actions. See EJC 11 November 1981, case 60/81, *IBM vs. Commission*, *Jur.* 1981, p. 2639 and Court of First Instance 17 February 2000, case T-241/97, *Stork Amsterdam vs. Commission*, *Jur.* 2000,

- p. II-309. However, preparatory actions can entail de facto definitive decisions, so that according to Court jurisprudence there should be an opportunity for legal protection. See EJC 11 November 1981, case 60/81 and Court of First Instance 17 February 2000, case T-241/97, EJC 22 June 2000, case C-147/96, *Nederland vs. Commission*, *Jur.* 2000, p. I-4723 and Court of First Instance 20 November 2002, case T-251/00, *Lagardère SCA and CANAL+ SA vs. Commission*, *Jur.* 2002, p. II-4825. See: L. Parret, 'Judicial Protection After Modernisation of Competition Law', *Legal Issues of Economic Integration* 2005, pp. 355-358.
- 83 See, e.g., CBB 30 November 2006, AWB 05/758 and 05/815, *Gas Transport Services vs. NMa*, LJN:AZ3365.
- 84 Cf. Senden 2004, pp. 386-392.
- 85 CBB 2 August 2002, AWB 00/641, *Electrabel et al. vs. DTe*, LJN:AE7773. The Florence Forum consists of representatives of the member states, the national regulatory authorities, the European Commission and the stakeholders. The Forum attempts to reach agreement on solutions to the obstacles to cross-border trading of electricity on points where the European directives do not offer an answer.
- 86 See also Larouche and De Visser 2005.
- 87 EJC 14 December 2000, case C-344/98, *Masterfoods*, *Jur.* 2000, p. I-11369, annotated by K.J.M. Mortelmans and M.G. Wezenbeek-Geuke, *SEW* 2002, no. 3, pp. 107-110.
- 88 CBB 11 May 2007, AWB 06/125, 06/127, 06/128 and 06/129, *Tele2 et al. vs. OPTA*, LJN: BA4880 and CBB 29 August 2006, AWB 05/903 and 05/921 to 05/931, *KPN et al. vs. OPTA*, LJN: AY7997. This line was also followed by the CAT (Competition Appeal Tribunal), which quashed a decision by OFCOM on the grounds of insufficient investigation and justification, despite the approval of the Commission CAT 29 November 2005, *Hutchinson 3G UK Limited vs. OFCOM*, [2005] CAT 39. The Irish Electronic Communications Appeals Panel took a comparable approach, see Decision No: 03/05 of the ECAP in respect of Appeal numbers ECAP6/2005/03,04,05, *Vodafone, O2 and Meteor vs. Comreg*. See also Lavrijssen-Heijmans 2006, p. 355 ff.
- 89 European Commission, *Communication from the Commission to the Council and the European Parliament Report on progress in creating the internal gas and electricity market*, COM (2005)568 final, European Commission, *Green Paper, A European Strategy for Sustainable, Competitive and Secure Energy*, COM (2006)105 final, European Commission, *Communication from the Commission to the Council and the European Parliament Prospects for the internal gas and electricity market*, COM (2006)841 final and European Commission, *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on the Review of the EU Regulatory Framework for electronic communications networks and services*, COM (2006)334 final.
- 90 European Commission, *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, on market reviews under the EU Regulatory Framework (2nd report) Consolidating the internal market for electronic communications*, COM (2007)401 final.

- 91 See also: Inter-Institutional Monitoring Group, *Third Report Monitoring the Lamfalussy Process*, Brussels 17 November 2004, pp. 32-33 and CESR, 'Preliminary progress report, 'Which supervisory tools for the EU securities market? An analytical paper by CESR ("Himalaya report")', ref: 04-333, October 2004, pp. 18-22.
- 92 See the letter from Commissioner Reding to the Chairman of the ERG, Request for advice of the European Regulators Group in the context of the Review of the Regulatory Framework for Electronic Communications Networks and Services, D(2006)2685, Brussels, 20 November 2006.
- 93 ERG, European Regulators Group Advice in the context of the Review of the Regulatory Framework for Electronic Communications Networks and Services, in response to the letter by Commissioner Viviane Reding of 30 November 2006, 27 February 2007 and ERGEG's response to the European Commission's Communication "An Energy Policy for Europe", ref. C06-BM-09-05, 6 February 2007. For the sceptical attitude of the national authorities to EU independent agencies, see also: M. Thatcher and D. Coen, 'Reshaping European Regulatory space: An evolutionary analysis', to be published in *West European Politics* 2008.
- 94 ERGEG, '3<sup>rd</sup> Legislative Package Input, Paper 2: Legal and Regulatory Framework for a European system of Energy Regulation, An ERGEG public document', Ref: C07-SER-13-06-02-PD, 5 June 2007 and ERG 2006.
- 95 The proposal of 18 September 2007 has been published on: [http://ec.europa.eu/energy/electricity/package\\_2007/index\\_en.htm](http://ec.europa.eu/energy/electricity/package_2007/index_en.htm). The Commission has also put forward proposals for the amendment of the energy directives and regulations. See also footnote 94 and ERGEG, '3<sup>rd</sup> Legislative Package Input, paper 5: Powers and Independence of National Regulators, An ERGEG public document', ref: C07-SER-13-06-5-PD, 5 June 2007.
- 96 The term 'EU independent agency' is used in the discussions of the Commission proposals. Closer study of the proposals shows that the agency builds on the 'network plus' model.
- 97 These are the parts of the national transmission networks that together are important for cross-border trade in energy within the European internal market. See ERGEG, '3<sup>rd</sup> Legislative Package Input, paper 3: Network Regulation: Overall Framework, an ERGEG public document', Ref: C07-SER-13-06-3-PD, 5 June 2007.
- 98 They have also taken account of the Draft Interinstitutional Agreement on the operating framework for the European regulatory agencies, COM (2005)59 final.
- 99 Dehousse 2002, p. 209, M. Everson, 'Good governance and European Agencies: The Balance', in: Geradin, Muñoz and Petit 2005, p. 150-153 and A.T. Ottow, *Telecommunicatietoezicht, De invloed van het Europese en Nederlandse bestuurs(proces)recht*, The Hague: SDU 2006, pp. 18-21.
- 100 Ottow 2006, pp. 18-21.
- 101 See DTe 22 September 2006, Informele zienswijze uitbreiding H-gas transportsysteem, kenmerk 102259/39.B828.
- 102 See footnote 28.
- 103 See also EJC 2 May 2006, case C-217/04, United Kingdom and Northern Ireland vs. European Parliament and Council (ENISA), Jur. 2006, p. I-3771. In this judgement the Court ruled that the founding of the European Network and Informa-

- tion Security Agency (ENISA) was lawful on the grounds of Article 95 EC. ENISA cannot take binding decisions.
- 104 Lenaerts and Verhoeven 2002, pp. 39-44.
- 105 Ibid., pp. 38-39.
- 106 Everson 2005, pp. 148-150 and Lavrijssen-Heijmans 2006.
- 107 D. Curtin, 'Delegation to EU Non-Majoritarian Agencies and Emerging Practices of Public accountability', in: Geradin, Muñoz and Petit 2005, pp. 90-91.
- 108 Curtin 2005, p. 91.
- 109 Curtin 2005, p. 113 and Vos 2005, pp. 120-137.
- 110 See: Carol Harlow and Richard Rawlings, 'Promoting Accountability in Multi-Level Governance: A Network Approach', European Governance Papers, no. C-06-02.
- 111 Everson 2005, p. 147.
- 112 According to Everson, the case-law of the Court of Justice already contains indications that the administrative procedures should contribute to the legitimacy of the choices made by the executive, Everson 2005, p. 159. However, merely following a consultation procedure does not in itself guarantee a legitimate decision.
- 113 See Curtin 2005, pp. 88-119, Vos 2005, pp. 120-137 and Curtin 2006, pp. 46-54.
- 114 Stakeholder is a broad notion which refers to different parties with divergent interests (clients, competitors, consumers and the regulated market players). It would go beyond the scope of this article to set out in detail what the interests of all stakeholders are and how those interests can be accommodated in terms of representation and legal protection.
- 115 From case C-188/92, *Textilwerke Deggendorf*, Jur. 1994, p. I-833 it follows in any event that the Court demands respect for the formal legal force of Commission decisions in cases where a 230 appeal against them would have been admissible without doubts and those concerned had been aware of the decisions.
- 116 EJC 31 May 2005, *Syfait*, jur. 2005, p. I-4609, no. 36.
- 117 In case C-53/03 there were also other reasons for doubting whether the competition authority qualified as a court which was competent to submit questions for a preliminary ruling (see no. 29).
- 118 Harlow and Rawlings 2006.
- 119 Ibid., p. 8 ff.
- 120 Ibid., p. 19 ff.



## 5 INVESTMENTS IN INFRASTRUCTURES: STRATEGIC BEHAVIOUR

*Ernst ten Heuvelhof<sup>1</sup>*

### 5.1 INTRODUCTION AND PROBLEM DEFINITION

#### 5.1.1 INTRODUCTION

*Case 1:* The Betuwe route is a 160-kilometre railway line, exclusively meant for the transport of goods from the port of Rotterdam to the European hinterland. The route was controversial right from the beginning; there were many passionate opponents and many equally committed proponents. The history of the cost estimates for this line is remarkable. The first estimates were approximately € 3.7 billion, with an expected operating profit, but now the costs are expected to be just under € 5 billion, with an operating loss.

What is the matter here? Is this a one-off project of both type and magnitude, the cost of which cannot be properly estimated? Or have the proponents of the project managed to constantly present too rosy a picture of the estimates so as to get the railway line beyond the point of no return, after which the project will be realised anyway, regardless of the real costs? In the first case, it would be a matter of ignorance, with unpleasant consequences. In the second case, it would be strategic behaviour, *camel's nose* (Wildavsky 1978) behaviour.

*Case 2:* The telephone network consists of two parts: at the national level, several fibre optic networks that lead to 1300 neighbourhood exchanges and the *local loop* that links these neighbourhood exchanges with individual homes through street boxes. KPN has the monopoly on the *local loop*, but has to provide its competitors access to the *local loop*. KPN also has to afford its competitors room in the neighbourhood exchanges to install equipment there, enabling them to actually make their services available to households. KPN has announced that it wants to make its network more efficient by extending the fibre-optic cables to the street boxes, which would make the neighbourhood exchanges superfluous. This could raise the level of service to the consumers. KPN can sell the neighbourhood exchanges, and operating the network will become cheaper for KPN. But the consequence is that KPN's competitors will be forced to accelerate the depreciation of their investments in the neighbourhood exchanges.

What is the matter here? Is this a company that makes technical innovations and wants to serve its customers in a state-of-the-art manner, with a positive effect on the economy as a whole? Or is KPN trying to saddle its competitors with increased costs, thus discouraging them from making further investments? In the first case, it would be economically desirable action, in the second case strategic behaviour, *raising rival's costs*.

Both cases concern investments in infrastructure. In both cases, this infrastructure benefits the Dutch economy. In both cases, the infrastructure also benefits the owner itself. This benefit may be so great that, conceivably, it will tempt the owner to behave strategically, i.e., not to play the game quite fairly. However, in both cases, there is no concrete evidence of strategic behaviour being used.

This essay deals with investments in infrastructure, particularly with the strategic behaviour surrounding these investments. For brevity's sake, strategic behaviour can be defined here as behaviour that is very unilaterally and relatively secretly aimed at realizing the actor's self-interest. Strategic behaviour involving investments in infrastructure may have major consequences for these infrastructures as well as for their quality, their timely availability, etc. Since infrastructures are so important for the economy as a whole and the costs that these infrastructures entail are so high, suboptimal decisions about investments in infrastructure as a result of strategic behaviour may have major consequences, as well as for the economy as a whole.

### 5.1.2 PROBLEM DEFINITION

*The problem definition is: what forms of strategic behaviour are conceivable in connection with investing in infrastructure, how will this behaviour influence the level of investment in infrastructure and how will institutional changes like privatization and liberalization influence the strategic behaviour?*

Subquestions here are:

- What is strategic behaviour in general?
- What forms of strategic behaviour exist and what are the sources of this behaviour?
- What strategic behaviours involve investing in infrastructure?
- What are the consequences of strategic behaviour in the sense that too much or too little is invested?
- To what extent do current institutional changes like privatization and liberalization lead to more or less and different strategic behaviour?
- What potential solutions are there to curb strategic behaviour?

I will examine here what strategic behaviours can be expected and how they will affect the investments in infrastructure. I will not examine:

- To what extent this strategic behaviour is actually manifesting itself?
- How the effect of strategic behaviour on the level of investment relates to other influences on investments in infrastructure. In concrete terms, although parties may, in a particular situation, display strategic behaviour that leads to, e.g., overinvestment, other forces may lead to underinvestment. How these two forces relate to each other is beyond the scope of this essay.

### 5.1.3 STRUCTURE OF THE ESSAY

The structure of this essay is as follows. Paragraph 5.2 focuses on strategic behaviour. It describes a number of characteristics of this behaviour. In paragraph 5.3, I set out the sources of strategic behaviour and what forms of strategic behaviour they lead to. First in a general sense, then focussing on investments in infrastructures. In this chapter, I will also indicate what forms of strategic behaviour can be expected in the old world of infrastructures and what strategic behaviours may

arise under the new institutional conditions. Paragraph 5.4 summarizes these behaviours and gives a qualitative indication of the effect of these strategic behaviours on the investments in infrastructures, particularly in terms of overinvestment and underinvestment. Paragraph 5.5 concludes with a number of potential solutions to curb strategic behaviour.

## 5.2 STRATEGIC BEHAVIOUR

### 5.2.1 INTRODUCTION

The institutional changes implemented in recent years in the world of infrastructures were intended to increase productive efficiency and innovation. Although many of the advantages have actually manifested themselves, this is not true of all advantages. One of the reasons why the expected advantages are rarely delivered in their entirety in practice is the ‘strategic behaviour’ of the players involved.

Strategic behaviour is a frequently used concept. In the first place, authors refer to strategic behaviour when trying to explain why the results of institutional changes like privatization and liberalization are so disappointing. One of the explanations they offer is ‘the strategic behaviour’ of the parties involved.

In the second place, there are authors who describe and analyse a particular type of behaviour. They do so convincingly and in colourful terms, such as adverse selection (Akerhof 1970), moral hazard (Neelen 1993), predation (Dixit 1980; Spence 1977), collusion (Shapiro 1989), vertical foreclosure, puppy-dog strategy (Fudenberg and Tirole 1984), etc. They position these behaviours as species of the strategic behaviour genus without further defining this generic concept of strategic behaviour.

Both groups of authors use the concept of strategic behaviour rather associatively, without defining it sharply and distinguishing it from other types of behaviours. However, their analyses show that it is a societally and scientifically relevant phenomenon.

A third group of authors, including Scharpf (1997), Crozier and Friedberg (1980) and Williamson, (1979), although describing strategic behaviour in more generic terms (e.g., Williamson: “self interest seeking with guile”), in their turn, they fail to define the concept concretely and specifically and to operationalize it.

This section aims to clarify the concept of strategic behaviour. I do so by building a bridge between the generic descriptions of strategic behaviour and the highly concrete examples of strategic behaviour elaborated here and there. The problematic definition of this paragraph is as follows: what is strategic behaviour and what characteristics does strategic behaviour have in practice?

### 5.2.2 CHARACTERISTICS OF STRATEGIC BEHAVIOUR

I successively distinguish a number of characteristics of strategic behaviour:

- Strategic behaviour is reflexive
- Strategic behaviour is relational and takes shape in interactions
- Strategic behaviour has a time dimension
- Strategic behaviour is aimed at narrow self-interest
- Strategic behaviour is ambiguous
- Strategic behaviour is intentional.

Behaviour is strategic if it satisfies each of these six characteristics. Having described these characteristics, the section concludes with a brief reflection on the concept of strategic behaviour, putting it into perspective.

#### ***Strategic behaviour is reflexive***

Take the following example: The behaviour of a tennis player who trains by hitting the ball against a training wall differs from that of the same player facing a flesh-and-blood opponent in a real game. Hitting balls effectively against a wall requires other skills and tactics than being successful in a match. What are the differences? They have to do with the nature of the player's 'opponent'. After all, a tennis wall is not a real opponent. The wall does not think, unlike the opponent. The training wall is not reflexive, unlike the opponent. The wall returns a ball hit in the same way in an always-identical way. An opponent, however, does not. He will vary his strokes, knowing that it will increase his chance of winning. This difference in reflexiveness propagates and leads to a chain of differences, because the tennis player knows that the wall is not reflexive whereas his opponent is. He will consider this and adapt his behaviour to it. He anticipates his opponent's reflexive behaviour. The third step is that the game between the tennis player and the wall will develop differently from the game between two players, which will be far more varied, more capricious and more unpredictable than a training session involving a player hitting a ball against a wall.

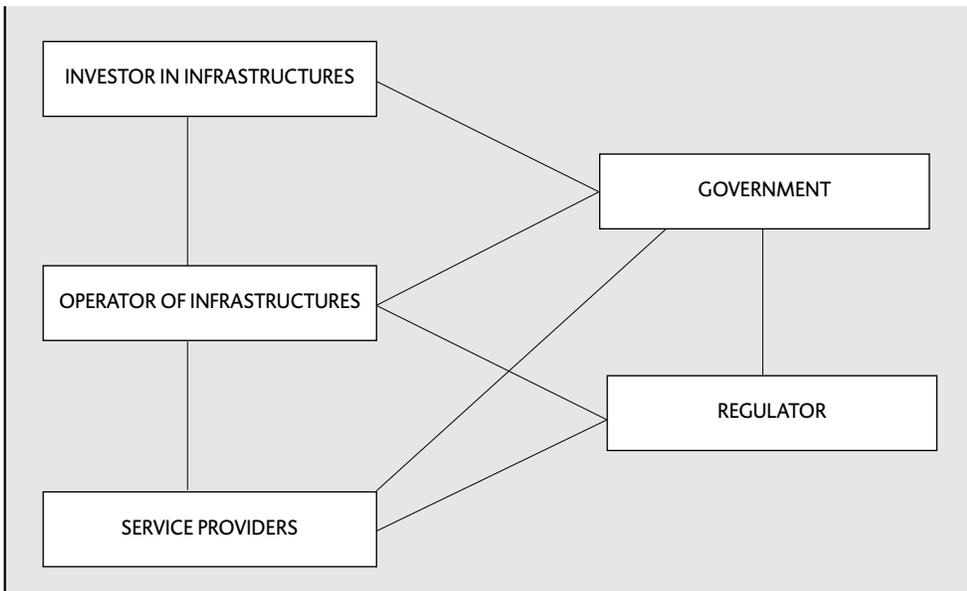
Emphasizing the reflexive character of strategic behaviour, I assume the existence of a certain freedom of will in everyday life between actors, in addition, of course, to the importance of historically formed institutions that form and condition the behaviour of actors. This assumption is in line with the approach expounded by Scharpf in his work *Games Real Actors Play*, (Sharph 1997) known as actor-centred institutionalism (Hemerijck 2001).

How does this reflexive character of behaviour manifest itself in investors in infrastructure? Investors will consider the consequences of their investments. They will wonder how certain it actually is that there will still be a market for the infrastructure capacity in a few decades. They will reflect on the depreciation period, but also on the prices they will ask. They will be aware that their behaviour (big investments, small investments, high prices or low prices) provokes behaviour in other actors that, in turn, may affect their future position.

***Strategic behaviour is relational and takes shape in interactions***

The behaviour of the tennis player in the match is relational; it takes shape in interactions, in this case in the interaction with his opponent. He anticipates the behaviour of the other and responds to it. This brings us to the field of game theory. “A game is a situation of strategic interdependence: the outcome of your choices (strategies) depends upon the choices of another person or persons acting purposively.” (Dixit and Nallebuff 1991: 85). Thus strategic behaviour always occurs in a relationship between actors. What relations are relevant to an investor who invests in infrastructure? See table 1.

**Table 5.1**      **Relations relevant to investors in infrastructure**



In theory, the investor in the infrastructure and its operator need not be identical. In order not to complicate the argument, I will present them as identical in the rest of this essay. An infrastructure operator will maintain commercial relations with the operators of services that use the infrastructure. (Schiphol Airport with the airlines; Prorail with NS (National Railways), Tennet with the energy companies, etc.). Moreover, infrastructure operators will, generally speaking, have to deal with regulators. Tennet with DTe, KPN with OPTA, etc.

***Strategic behaviour has a time dimension***

As I pointed out above, strategic behaviour takes shape in interactions. It is a game of anticipations, of actions and reactions. The mere fact that anticipations, actions and reactions take place at three different moments introduces at least the factor of time in strategic behaviour. In addition, the time dimension may become visible in strategic behaviour in other ways. I will mention two of them.

In the first place, bounded rationality always involves a time dimension, because bounded rationality implies that it is impossible to foresee everything and include it in the arrangement. Because of bounded rationality, the arrangement must remain “incomplete” (Williamson 1989: 150). This makes supplements to the arrangement inevitable in the course of time. Actors will want to use this incompleteness and “fight” for their interest in the later supplements. This may easily trigger opportunistic behaviour. They then try to use the gaps in the arrangement that were unforeseeable. Particularly actors who made specific investments, i.e., investments that can no longer be used for any purpose other than implementing the provisions in the arrangement, will be vulnerable to such strategic, opportunistic behaviour, because they are less flexible in their behaviour than other actors are.

The conclusion is that incompleteness and bounded rationality make follow-up actions of the actors involved inevitable and that actors will also want to serve their interests in these actions, which may all too easily give these actions an opportunistic touch.

Bounded rationality and opportunism are frequent, inevitable phenomena rather than exceptional ones. This is why the designers of arrangements should take bounded rationality and opportunism as their point of departure (Williamson 1989: 139).

In the second place, the time dimension also manifests itself in the frequently displayed positional game. In a positional game, the actor initially relinquishes direct material gain. Initially, the strategist only strengthens his position or weakens his opponent’s position. He does not actually strike until the second phase. In many cases, that second phase is not even necessary, but parties, experienced as they are, know enough once they have acquired the right position. We often see this aspect of strategic behaviour in chess. Chess matches are rarely won and lost by directly capturing pieces and threatening the king. The real game involves occupying positions on the chessboard, by manoeuvring pieces into a position that strengthens them later in the game rather than immediately, by heading off the opponent, preventing him from taking up particular positions, by threatening him with particular moves, etc. The real blow in this chess game is less interesting than the moves that precede it. But those “strategic moves” may look harmless in themselves and only acquire a meaning for the expert, who can estimate the value of the threat they pose. This aspect of strategic behaviour is in line with a description by Schelling, who writes that strategic behaviour “... is not concerned with the efficient application of force but with the exploitation of potential force” (Schelling 1960: 5). With regard to industrial economics: “strategic behaviour has reference to efforts by established firms to take up advance positions in relation to actual or potential rivals, to introduce contrived cost disparities, and/or respond punitively to new rivalry” (Williamson 1989: 176, footnote 26).

The conclusion is that strategic behaviour tends not to become visible by regarding the time dimension. Only in a series of behaviours can a pattern become visible that might be strategic. An observation of all individual behaviours might have yielded no clue at all about the strategic character of the behaviour and an analysis over time might be needed to make a pattern visible.

This time dimension plays an emphatic role in investments in infrastructure. Two characteristics of these investments are responsible for this:

- The high costs in relation to the long depreciation period;
- The *sunk* character of the investment, which “locks up” the investor with his investment for an extremely long time, preventing him from using his money in another, possibly more profitable way; and forcing him to wait and see whether the same demand for his infrastructure will exist in a few decades.

### ***Strategic behaviour is aimed at narrow self-interest***

The main assumption of game theory and economic theory is that actors seek to maximize their individual advantage. The classic theories also assumed that maximizing individual advantage would eventually also maximize wealth at the collective level. However, this proposition has been questioned in the more sophisticated theories and in practical policy. Katz shows that parties that each choose to serve their own interest may lower collective wealth and eventually their own wealth. Katz describes the case of an actor making an investment that only has value in its relation with another actor. This investor is vulnerable to strategic behaviour of other parties that know that the investor has nowhere to go after the investment. Of course, the investor also knows this and will therefore invest suboptimally. Both the investor and the other parties would have been better off if the investor had invested more and the other parties had deprived themselves of the possibility for opportunistic behaviour (Katz 1989). However, as long as opportunistic behaviour is possible for the other parties, this threat is imminent and investments will be suboptimal. This has given strategic behaviour a slightly more negative connotation. The pursuit of the narrow self-interest might prejudice the wider public interest (Jamasb, Nillesen and Pollitt 2003). Strategic behaviour is primarily aimed at self-interest, even if it has the potential to harm the public interest.

In this section, I follow definitions of strategic behaviour that indicate that this behaviour may conflict with the public interest.

### ***Strategic behaviour is ambiguous***

As I noted above, strategic behaviour is reflexive, in the sense that the strategist distinguishes between the ways he explains his behaviour in public and the reasons for his behaviour. I also suggested that strategic behaviour is aimed at the narrow self-interest, even if it runs counter to the public interest. The combination of these two characteristics is obvious now. The strategist will reflexively realize that, with his behaviour, he pursues his own interest, while this may harm the public interest. However, he will deny this in public. In public, he will

emphasize that his behaviour does not jeopardize the public interest. In other words, in the public performance, the strategist emphasizes that his behaviour does not harm the public interest, while saying backstage that the behaviour does serve his own interest and that it may harm the public interest. This is only possible with behaviours that are ambiguous. Compare the definition of opportunism given by Williamson: “self-interest seeking with guile”.<sup>2</sup>

One meaning is that the behaviour serves the public interest; the other meaning states that it serves the strategist’s interest. There is no need to explain that the first interpretation comes from the strategist himself, and the second interpretation from the strategist’s critics. The strategist will indignantly reject the second interpretation. It will not be easy to prove the strategic character of ambiguous behaviour. It has to be proved that the strategist speaks with two tongues, one in public and one behind the screens and that he does so deliberately. The “smoking gun”, or decisive evidence for the existence of such strategic behaviour in a concrete case can, for example, be an overheard conversation, leaked minutes, etc.

Many investments in infrastructure can be made ambiguously and can easily be called strategic. Investors can always justify their behaviour in terms derived from the public interest. Concepts like “utility services”, “effects on the economy as a whole”, etc. are important here. However, these investors can also be regarded as ordinary investors seeking a good, or even the highest, return.

### ***Strategic behaviour is intentional***

It may be concluded from the fact that the strategist distinguishes between what he announces in public about his behaviour and what he says backstage that his behaviour is intentional. Purpose and intent should therefore be criteria for the establishment of whether behaviour is strategic (Ordover and Saloner 1989). I should point out here that not every definition of strategic behaviour comprises this intentionality. A group of definitions of strategic behaviour infers, inductively, an underlying strategy from concrete behaviour. “The analyst can discover regularities, which make sense only relative to a strategy. Therefore, this strategy is nothing more than the inferred basis, ex post facto, for the empirically observed regularities of behaviour. It follows that such a strategy is in no way synonymous with willed behaviour, any more than it is necessarily conscious” (Crozier and Friedberg 1980: 25).

### **5.2.3 ESTABLISHING STRATEGIC BEHAVIOUR**

It is difficult to qualify behaviour as strategic in a concrete situation. In theory, there are two approaches to establishing strategic behaviour. The first is to analyse and qualify the behaviour itself. This is difficult because of the ambiguity of strategic behaviour. At least two interpretations of the behaviour are always possible, which hampers an unambiguous qualification. In the second place, the consequences of the behaviour can be analysed. For example, it could be an analysis of market prices, of the level of investment, of the extent to which the demand

is met, of the extent to which the company's investments contribute to optimal economic growth, etc. These analyses always have the following structure. The analyst establishes an ideal level (the "ideal price", the "ideal growth", etc.). He then measures the real level. A deviation from this level means that there might be strategic behaviour. There are examples of such analyses. Pollitt demonstrates to what extent the system of planning the capacity of the British electricity sector leads to a systematic overestimation or underestimation of the demand for electricity. Overestimation or underestimation might be an indication of strategic behaviour. The Netherlands Institute for Spatial Research has analysed which investments in the motorway system contribute the most to economic growth (Ruimtelijk Planbureau 2006). The reasoning may as follows: where there are deviations from the ideal, something must be wrong. The deviation might be explained because one or more actors succeeded in making suboptimal investments, possibly – but it remains uncertain – to serve their own interests.

Although this reasoning is problematic in itself, it becomes even more complex if we remember that this calculation is based on many assumptions that in themselves are also debatable. For example, what is the demand for electricity? The demand is not a constant, but depends on the price of electricity. A low price means a higher demand. So what does it mean if the estimated capacity falls short of the demand? To what price level does this apply?

In theory, an optimal price level has been reached once the sum of the producer surplus and the consumer surplus has been maximized. This basic assumption has been worked out for the generation capacity in the electricity sector (De Vries 2006). The producers will realize that an investment that leads to overcapacity will soon lower the prices to a level at which the investments are no longer recouped. They will therefore remain cautious, read: be inclined to underinvest. However, that will at any rate harm the consumer surplus (read: the consumer interest) and might very well conflict with a higher public interest. Research has shown that a very small shortage of generation capacity will quickly increase consumer prices. During the California power crisis in 2000 and 2001, at most 2 per cent of load was shed at any time, but the costs to consumers were extremely high. The costs of excessive investment, on the other hand, appear much more limited. From a societal perspective, it is preferable to have a small consumer surplus, even if this affects the producer surplus. In reality, producers manage to realize a producer surplus. Evidently, an incentive structure exists here that encourages strategic behaviour (Guthrie 2006).

However, in the ideal level of investments in infrastructures, more considerations play a role than maximizing the producer surplus or the consumer surplus. Infrastructures have many external effects, both positive and negative. Take, for example, Schiphol Airport, which has positive effects on both the regional and the national economy. Many companies depend on the business generated by Schiphol without contributing directly to the investments at Schiphol. But Schiphol also has negative external effects. For example, Schiphol causes noise pollution, causing a decline in real estate values without the owners being fully compensated. To determine the societally desirable size of Schiphol as an infra-

structure, not only the consumer surplus and the producer surplus should be maximized, but the balance of positive and negative external effects should also be as positive as possible. Although the producer surplus and the consumer surplus may be calculated unambiguously, the positive and negative external effects are very difficult to establish. Calculations of them will always be controversial.

***Summary: characteristics of strategic behaviour***

To summarise, what are the main characteristics of strategic behaviour? Strategic behaviour is reflexive. The strategist reflects on his behaviour and realizes that he would harm his own self-interest if he included the reasons for his behaviour in his public statements.

Strategic behaviour is relational. Strategic behaviour thrives in a constellation in which actors are aware of each other and can mutually react to each other's behaviour and anticipate it. Configurations with a limited number of actors fulfil this condition.

Strategic behaviour has a time dimension. The interactive character of strategic behaviour has, by definition, a time dimension, if only because move and countermove cannot take place simultaneously, but are linked serially. Furthermore, there is the bounded rationality of the actors, which makes it impossible to foresee the whole future at one particular moment and lay down everything in detail in an arrangement (e.g., a law or an agreement). This means that arrangements always have to be supplemented and/or changed in the course of time. Finally, strategic behaviour may contain a positional element, in the sense that the strategist tries to occupy a position that will be advantageous to him at a later stage.

Strategic behaviour is unilaterally aimed at the narrow self-interest. The core of strategic behaviour is that it serves the strategist's enlightened self-interest. This does not mean, however, that all behaviour that serves self-interest is strategic behaviour. I am concerned here only with strategic behaviour where the strategist serves his own self-interest, even if he thinks that this may prejudice the public interest. This may go so far as to seriously harm other interests.

Strategic behaviour is ambiguous. Strategic behaviour is open to two interpretations. The first interpretation may be that the behaviour does not harm the public interest, the second view is that the behaviour serves the strategist's individual interest at the expense of the public interest.

Strategic behaviour is intentional. The strategist will realize the tension that is inherent in his behaviour. He realizes the ambiguity of his behaviour and uses it by publicly emphasising that his behaviour poses no harm to the public interest, while stating in private that his behaviour primarily serves his own interest. Privately, it may even be agreed upon to emphasise the first interpretation in public and deny that the second interpretation is relevant.

#### 5.2.4 STRATEGIC BEHAVIOUR POSITIONED

I have already given a relatively specific elaboration of the concept of strategic behaviour above. Where does this definition differ from other perspectives of strategic behaviour? To explore this question, comments on this definition from three dominant disciplines has been formulated below, followed by an indication of the added value of the approach chosen here.

*Business administration scholar: every company should have a strategy and behave in accordance with it. Strategic behaviour would then mean that the company has a strategy and behaves in accordance with it.*

A company that formulates a strategy for the future, does something completely different from a company that displays strategic behaviour. A strategy is a company's long-term vision, which, in many cases, has been laid down and is public. A company that has a strategy is valued positively. It means that the company considers its position and its future rather than operating in an ad hoc manner.

Although strategic behaviour is semantically almost identical to strategy, it has a completely different meaning. Strategic behaviour is not something that has been laid down. The company will always deny that it "behaves strategically." The valuation of strategic behaviour tends to be problematic and is ambiguous at any rate. Strategic behaviour is rather synonymous with operating tactically or "politically" (Mintzberg 1983).

It is quite possible for a company to have a "strategy" while also "behaving strategically". This strategy consists of politically and commercially correct statements, while in reality it behaves strategically, perhaps even under the cover of the strategy.

*Jurist: Behaviour is either lawful or unlawful. This also goes for strategic behaviour. If the court has not, or not yet, declared behaviour to be unlawful, it is permitted.* What is the relation between strategic behaviour, on the one hand, and behaviour contrary to law, on the other hand? Behaviour contrary to the law comprises all forms of unlawful behaviour, regardless of whether the behaviour is contrary to rules of criminal, administrative or private law.

The similarities between strategic behaviour and unlawful behaviour are obvious. Both have a strongly pejorative connotation. Both the actor using strategic behaviour and the actor acting unlawfully try to obscure their behaviour from their environment. Strategic behaviour is intentional, reflexive and relational. These characteristics also apply to many forms of unlawful behaviour.

However, there are also good reasons to distinguish between strategic behaviour and unlawful behaviour. The first has to do with the factor time. When it comes to unlawful behaviour, it is eventually the court that decides whether behaviour

is lawful or unlawful. Until that time, however, it is uncertain whether behaviour is permitted or not. Strategic behaviour is lawful until that moment. Parties of course have opinions about the desirability of that behaviour and in some cases judicial decisions are more or less predictable, but in many other cases it is almost impossible to prove violation of written or unwritten rules of law. This is also true if, in the transition process from the classic paradigm to the modern paradigm, there is a need to be able to quickly qualify behaviour legally – in real time and even in anticipation of the actual behaviour – as either permitted or not permitted. This question does not arise when behaviour has to be qualified in terms of strategic and non-strategic.

The second reason to distinguish between unlawful behaviour and strategic behaviour has to do with the ambiguity of behaviour. Strategic behaviour is by definition ambiguous. This ambiguity makes it possible to attach several meanings to concrete behaviour. Qualifying this behaviour as lawful or unlawful ends this ambiguity, or shifts the playing field somewhere else for strategically acting actors (De Jong and Stout 1983).

*Economist: “the market is an arena where a good entrepreneur acts cleverly and tries to realize advantages for his enterprise, even if this harms his competitor. That is the game and it will benefit everybody in the long term”.*

Good business operations are clever and strategic behaviour is also clever. Both types of action are good for the enterprise. It is here that the two types of behaviour resemble each other. But there is also an important difference. Strategic behaviour in the sense used here is not only clever, but above all sly. Strategic behaviour benefits the enterprise, and as such it does not differ from running a business wisely. However, strategic behaviour goes far beyond ordinary business operations. Acting strategically usually harms the public interest and, according to our definition, the person that acts strategically realizes that his behaviour harms the public interest. At the same time, he realizes that it may cause him reputation damage or even legal damage and he therefore denies that he is acting strategically. In some cases, he may maintain this for a long time because of the above-mentioned ambiguity. This definition shows that we see a clear difference between an entrepreneur’s ordinary, clever and aggressive behaviour and sly, strategic behaviour.

## **5.3 STRATEGIC BEHAVIOUR: SOURCES AND MANIFESTATIONS**

### **5.3.1 INTRODUCTION**

This chapter focuses on the strategic behaviour of actors involved in investing in infrastructures. I will start with the description of three sources/opportunities for strategic behaviour. They are derived from the literature about strategic behaviour in general and in network-based industries in particular. These sources are:

- *Fewness*. A configuration of a limited number of companies forms a source of strategic behaviour.
- *Information asymmetry*. Differences in information between actors offer an opportunity for strategic behaviour.
- *Position*. A vested position offers opportunities for strategic behaviour, as does a new position.

In the old institutional situation, these sources take shape in a way that is different from that in the new situation. The resulting strategic behaviour also differs. This is why, in the next section, I will first describe the old and the new institutional situation, after which I will deal with the three sources successively. For each of the sources, I will describe the potential strategic behaviour, and focus on the strategic behaviour surrounding investment in infrastructures, first in the old institutional situation and then in the new institutional situation.

### 5.3.2 FROM CLASSIC PARADIGM TO NEW PARADIGM

In this section, I describe the classic institutional situation surrounding infrastructures and the new situation. I describe both of them as ideal types.

The classic institutional situation is one in which one company owns all the links in the production chain (i.e., a vertically integrated company). This company has the monopoly and is owned by one or more governments.

In the new institutional situation, the links of the production chain have been unbundled, competition has been introduced in at least a number of links of the production chain and at least a few companies have passed into private hands. See table 5.2 for a survey.

**Table 5.2** Ordering in the classic paradigm and the new paradigm

	Classic paradigm	New paradigm
<b>Relations between links</b>	Vertical integration	Unbundled
<b>Competition</b>	Monopoly	Competition
<b>Ownership</b>	Public ownership	Private ownership

### 5.3.3 SOURCE 1: FEWNESS

#### **Fewness**

Fewness has two famous configurations for strategic behaviour: the monopoly and the oligopoly. The most obvious source of strategic behaviour is the monopoly. A company that has a monopoly is in a comfortable position. This company is the only one to offer a product or service and can exploit this position.

In oligopolistic and related market forms, actors are strongly competitor-oriented. They can be competitive because they have only a limited number of competitors (small-numbers rivalry). Given their interests, they react to and anticipate the steps taken by the other oligopolists. The utility functions of one actor are included in those of all the other actors, but as unknown variables. Any change in the behaviour of the other players has to be watched closely because it may influence the realization of their own aims. Every company tries aggressively to increase its market share, but if they all do so, all of them will be worse off (Shapiro 1989). Realizing this, they will at the same time feel compelled to cooperate with each other and make agreements. In an oligopoly, the same actors can compete and cooperate at the same time. In other words, companies in oligopolies feel divergent incentives. They will, at one and the same moment, feel inclined to cooperate and compete with each other. This causes the typical dynamic in oligopolies. Because of the inherent uncertainty about what others want and will do, actors have to make intelligent estimates of their own positions and possibilities and at the same time try to remain non-transparent to others. Fellner calls this process of anticipation and reaction between players 'conjectural interdependence'. Game theory is pre-eminently suitable for analysing the possible dynamic in this configuration (Shapiro 1989).

### ***Strategic behaviour based on fewness***

Monopoloid behaviour is of course the most conspicuous strategic behaviour. The monopolist is the only provider of a product or service, which allows it to ask relatively high prices, enabling it to earn higher profits than in a normal market. A configuration with many providers, however, forces a company to ask a price for its products that equals the variable production costs. If it tries to get more by increasing prices, a competitor will take advantage of this, undercut its price and lure away its customers.

Some customers would be willing to pay a price higher than that which equals the variable costs of the product. This is called the consumer surplus. This is the prosperity increase that is created when somebody buys something at a lower price than he would be willing to pay.

In a monopoly, this process takes a completely different course. A monopolist can afford to ask a higher price. Although a number of potential buyers will consider the price too high and refuse to purchase, the monopolist receives the higher price from all those who do purchase. If the monopolist chooses the right price, the higher price will compensate the decreasing number of buyers and it will earn a higher profit at the expense of the consumer surplus (Teulings, Bovenberg and Van Dalen 2005). This type of behaviour leads to allocative inefficiency and a less just distribution of income between producers and consumers. Moreover, monopolies tend to show cost inefficiency ;(Leibenstein 1966) with a particular tendency toward bureaucratic cost increases (Groenewegen 2005).

In oligopolies, companies are exposed to the temptation of colluding. The best-known form of collusion is the cartel, in which agreements are made about prices and quantities (Jacquemin and Slade 1989). Examples of cartels are price cartels, market-division cartels and tender cartels.

In many cases, collusion results in prices that are higher and the offered quantities are lower than what companies would ask in a constellation in which there is no collusion. That this is an interesting option for companies needs no explanation.

Collusion has an inherent tension. On the one hand, it is attractive for companies to collude, because it benefits all of the colluding participants. On the other hand, the colluding participants nevertheless remain each other's competitors and it is an attractive option for every individual participant in the collusion to cheat its competitors, despite the collusion, and undercut a price that is considered too high. The more the price exceeds the variable costs, the more room there is for cheating and the greater is the temptation to break the collusion. This gives rise to the non-cooperative games in oligopoloid configurations.

The optimal behaviour of player A depends on what he thinks player B will do. In his prediction, A uses the rules of the game and assumes that his opponents are rational, i.e., that they also make predictions to maximise their own pay offs (Fudenberg and Tirole 1989). Companies always choose the strategy that is considered the best response to the anticipated game of the opponent (Fudenberg and Tirole 1989).

Not all collusion is equally explicit. Implicit (tacit) collusion can also readily develop. Companies may collude without ever having communicated. No *binding contracts* are needed for collusion. Companies behave as if they have an agreement, but that agreement does not exist. In such a situation, all companies feel that it is in their common best interest to behave as if there are explicit agreements. That is, they offer their product or services at higher prices than necessary or put fewer products on the market than is feasible. They stick to this tacit agreement because of a (credible) fear that the new situation will lead to a breach of the "agreement" that, after some time, will be worse for them than the present situation (Fudenberg and Tirole 1989). The more likely deviations from the "agreement" will be punished, the smaller the risk of a breach of the "agreement".

### ***Strategic behaviour in investments in infrastructures***

#### ***Strategic behaviour in the classic paradigm***

Once an infrastructure has been built, relatively few extra investments will be needed to accommodate a new user. The additional costs for the operator are low. This makes infrastructures natural monopolies and implies that infrastructure operators operate in a configuration of *fewness*. In the classic paradigm, the infra-

structure operator is likely to be a monopolist. Four forms of strategic behaviour are conceivable here:

***Too little capacity on the infrastructure at too high prices***

The standard behaviour of the monopolist is to put less supply on the market than the demand. The resulting scarcity inflates the price. The monopolist sells less, but at a higher price per unit. Viewed from the perspective of investments in infrastructure, this leads to too low investments. However, in the world of infrastructures this type of behaviour is less obvious. There are two reasons for this. The first is that governments regard infrastructures as public goods, in some cases even as *merit goods*. This implies that the users of the infrastructure capacity do not have to pay the market price and in some cases not even the cost price. The government then subsidizes the difference between the price that the infrastructure operator asks for the use of the infrastructure and the price the user has to pay. As a result, the fluctuations in supply and demand affect the price less directly than they do in a normal market. The second reason is that the demand for infrastructure capacity is relatively inelastic in many sectors. The goods offered are indispensable and the consumer will buy capacity, regardless of a higher price.

***(More than) enough capacity at too high a price***

In both situations, i.e., a subsidising government and/or an inelastic demand, the monopoloid provider of the infrastructure can play the game of offering a lot of infrastructure at a relatively high price. From the perspective of investing in infrastructure, this means that too much rather than too little is invested in infrastructure. At any rate, too much is paid for the infrastructure. This conclusion may be somewhat contra-intuitive, because, generally speaking, in the classic paradigm, the infrastructures are used very intensively and there seems to be a shortage of infrastructure rather than a surplus. There are two explanations for this paradox:

- Infrastructure users pay a price that tends to be below the market value and even below the cost price. The demand then rises automatically to a high level, or too high a level, causing congestion. In this case, there is no underinvestment from a wealth-theoretical perspective.
- In the classic paradigm, investments in infrastructure are made from the central funds and through the government's budget mechanism (receipts basis). First of all, this means that these investments are balanced against expenditures for numerous other aims (education, social security, lower taxes, etc.). This may affect the level of investments. Secondly, revenue received later is not taken into account. This also keeps investments to a minimum. In this case, there is underinvestment.

In any case, the infrastructure operator holds a comfortable position and is always able to make a good return on its investments, even if they are too high. Two qualifications are appropriate here:

- In the classic paradigm, many commercially less interesting tasks may have

been imposed on a monopoloid infrastructure operator. This is due to the utility character of infrastructures. Examples would be universal service provision in many different variants. This puts a high and certain return in some perspective. However, the operator can recoup the costs incurred from its consumers.

- Regulation may prevent excessive prices. However, the fact remains that the public monopolist was under regulated, or not regulated at all. The reasoning here was that public companies were believed not to feel urged to earn excessive profits. Excessive profits, if any at all, would sooner or later find their way back to the public funds.

### **Goldplating**

Set against this comfortable monopolist position is a sacrifice. Infrastructure operators have to tolerate politicians and the media paying a considerable amount of attention to their performances. The infrastructure they operate lies, so to speak, in a public domain, where not only the voice of the owner and that of the market count, but also that of politicians. The politicians will pay great attention to the quantity and the quality of the capacity offered and make the most of any deviation from the ideal. An operator of infrastructure may quite conceivably want to prevent this and therefore invest a great deal in its infrastructure, thus ensuring its quality beyond dispute. Although this involves the investor in costs, as a monopolist offering an indispensable good it will have no difficulty in recouping the investments. If we pursue this reasoning further, it even pays to overinvest, because this reduces the risk of criticism and the monopolist will recoup the costs. This is the strategy of *goldplating* (Averch-Johnson effect; Averch and Johnson 1962). *Goldplating* makes the operator immune to criticism and, as a monopolist, it can pass on the costs. This is also the case if a regulator regulates the price through a system of rate-of-return regulation. This effect reinforces the effect described above, which is also indicative of a surplus of investments.

### **Too little, too late**

If an operator of infrastructure has to choose between investing and not investing, it will always wonder whether the investment will be profitable. If the demand for capacity of the infrastructure is not guaranteed, it will act with great reserve in its investment. In a normal market, this behaviour would be punished by a competitor that does take the risk, makes the investment and thus takes over the market. But if the operator is a monopolist, this threat is absent. If the volume of the future demand is uncertain, the monopolist will, generally speaking, postpone its investment too long, compared with the optimal timing from a societal perspective (Van Dijk 2008). The effect is that investments in infrastructure may be *too little and too late*. This effect is at variance with the effects described above. In the old paradigm, the infrastructure operator was relatively certain of the regulatory regime and could expect to be given ample opportunity to recoup its investment. Therefore, the effect of *too little, too late* is expected to be much weaker than the effects of the strategies described above, which point in the direction of overinvestment.

### ***Strategic behaviour in the modern paradigm***

The infrastructure operator will also operate in a configuration of fewness in the new paradigm. This is true in many cases for monopolists, and numerous cases, particularly in the telecom sector, for a duopolists or oligopolists. In the telecom sector, market developments and technical developments (e.g., convergence) have led to competition between infrastructures (between backbones at the national level; between television cable companies and telephone cable companies at the local level). But, of course, this does not mean that there is a real market yet. Where monopolies disappear, duopolies and, in some cases, oligopolies take their place.

Duopolists and oligopolists also ask *too high prices* for their infrastructure capacity. When the infrastructures have passed into private hands, the configuration of fewness can be expected to be used even more intensively. The private operator of infrastructure will feel a stronger incentive to show better results than the public operators did in the past, because private operators' revenues will end up with a limited number of profit makers. Public operator revenues will be distributed far more diffusely. Consequently, the incentive for cheap and profitable action will also be less obvious.

*Goldplating* and *too little and too late* are other strategies that they can employ. However, these strategies are more vulnerable in duopoloid and oligopoloid configurations than in a monopoly. There are two reasons: The first is the threat of the competitor who can always break the collusion and attack its competitor by offering its infrastructural capacity cheaper than a colleague that follows a goldplating strategy. This creates an incentive for the presentation of frugal offers. The same is true of *too little and too late*. A duopolist that makes ample use of this strategy runs the risk of having its competition offer capacity earlier and on a larger scale, making it a disincentive to employ this strategy.

The second reason is the regulation that has developed into an important institution in the new paradigm. Regulators will act apprehensively toward these strategies and attempt to keep them in check. How difficult that is will be discussed below under the section *Information asymmetry*.

In the new paradigm, an arrangement has been developed to potentially compensate the lack of competition somewhat. This is the arrangement of the *contestable market* (Baumol, Panzar and Willig 1982). This arrangement provides the organisation of a periodic auction for a monopoloid facility, e.g., an infrastructure. The winner of the auction earns the right to operate the monopoloid facility for a certain period. The theoretical advantage is that the monopoly advantage no longer accrues with the operator, but with the provider of the concession, which, in general, is the government. From the perspective of investing in infrastructures, this involves the risk that, having won the auction, the temporary operator will be disinclined to invest. The more the end of its operation concession approaches, the stronger this effect will be. This behaviour is sometimes referred to as *asset sweating*.

The fact that duopolists and oligopolists do not only always collude and sometimes actually compete is clear from the intensity of the competition between the various TV cable operators and the telephone cable operator in the Netherlands.

Thanks to convergence, the Dutch have access to broadband both via the telephone line and the TV cable. This has developed into an interesting struggle between KPN as the operator of the telephone line and the cable operators, which has given the Dutch access to cheap broadband (price competition) and led to a steady expansion of the capacity of both infrastructures (quality competition). As a result, the Netherlands is currently the world leader in the number of broadband connections. It is interesting that a third competitor has actually joined the battle here. Local governments and some corporations have launched a campaign to gain permission to build fibre-optic networks directly to homes (Fibre-to-the-Home). The capacity of this is almost unlimited. KPN and the TV cable operators, of course, understand that they will have to expand their capacity steadily to ward off this threatening competitor.

What are the eventual effects of this new paradigm for the investments in infrastructures? Fewness remains the dominant configuration and therefore the same effect will be visible as we have seen in the classic paradigm. Therefore, the tendency is that too much is invested and that too much is paid for the infrastructure capacity. However, this effect may be less strong than in the classic paradigm, for two reasons:

- There is some competition, which will incentivize operators of infrastructure to be more frugal in their investments so as to offer the capacity at a competitive price. Collusion might undo this effect. If the arrangement of contestable markets is chosen, there will be a strong incentive for underinvestment.
- There is regulation, which will put a check on prices. However, information asymmetry makes this game difficult for the regulator (see below).

#### 5.3.4 SOURCE 2: INFORMATION ASYMMETRY

##### *Information asymmetry*

The risks posed by a market configuration with a limited number of companies are well known. The arrangement frequently employed to mitigate these risks is regulation, e.g., by a competition authority or a regulator. These regulators observe the market and intervene when their observations give rise to concern about market developments. The question is what the quality of their observations is. To what extent are their observations valid, reliable and timely?

The observations of regulators are fed in part by information supplied by market parties. Market parties receive questions from the regulators, on the basis of which they provide information, and regulators will conduct interventions on the basis of these observations, issuing measures that will affect the companies. In this sense, the regulator is the “principal” and the companies are “agents” in the regulated market (Baron and Myerson 1982; Laffont and Tirole 1986).

To create a clear insight into the dynamic in the relation between principal and agent, two differences between principal and agent should be pointed out (Groenewegen 2004). First, there are differences in interests between principal and agent. The principal wants the agent to behave in accordance with the principal's wishes and interests, whereas the agent will mainly regard its own interests as the guiding principle for its behaviour. Of course, it is in the agent's interest to comply to a certain extent with the principal's wishes. The second difference lies in the information that the principal and the agent have (information asymmetry). The principal has more information than the agent does about future policy, for instance, or about priorities in the implementation and enforcement of current policy, or political preferences, etc. However, the agent has more information about the market, about the characteristics of the technology used in a particular industry, about the cost structure, about returns, etc than the principal. By and large, the situation between principal and agent can be characterized as follows: although the principal is able to establish the direction and tell the agent what to do, the agent has the relevant information that is needed to plot the course and evaluate whether things are moving in the right direction. This information advantage enables the agent to use its discretionary room to realize its own interests, even if this damages the principal's interests. Williamson points out that this offers room for opportunistic behaviour by the agent (Williamson 1989). This room exists because the principal lacks sufficient information to monitor the principal's every action.

### ***Strategic behaviour based on information asymmetry***

Information asymmetry as a phenomenon is inevitable. In general, information asymmetry benefits the agent. Moreover, in many cases, the agent is able to increase the difference in information than it inevitably would by, for example, using strategic nondisclosure, disguise, or distortion of information (Williamson 1989). The room that the agent thus creates for itself becomes manifest in two kinds of strategic behaviour: adverse selection and moral hazard.

Adverse selection occurs during the preparation of a decision, a contract or a scheme (in a wider sense, an arrangement). The principal or contract partner contemplates the design of an arrangement and negotiates this with the agent. The agent has an information advantage and will keep some of this to itself (hidden information) (Neelen 1994) to influence the design of the arrangement in its favour, even if this prejudices the principal's interest. This is how an arrangement comes into being that neither maximally serves the principal's interests nor generates the optimal trade-off between the interests of principal and agent. What this may result in is indicated in Akerlof's famous "lemon story" (Akerlof 1970).

"Not all cars of a particular make and a particular year are equally good. A few cars in every year of a particular make tend to be less of a success. They show more or less serious flaws. These are lemons. Lemons cannot always be recognized at first sight, not even after a first test drive. Buyers

of such a lemon will be disappointed about their purchase and be inclined to offer their car for sale soon. They will probably not do so through official, expert dealers, because these may unmask their car as a lemon, but through the informal market (e.g., through an advertisement). Buyers of good cars, however, will keep the cars they have bought longer and not offer them for sale. The inevitable consequence is that on the informal market always more lemons will be offered for sale and always fewer good cars. Potential buyers know this and, to be on the safe side, when making offers for cars they assume they will come across a bad car. They will therefore offer low prices. Of course, sellers of good cars will think the prices offered unacceptable. They will withdraw their car from this market and try to sell through a different channel. As a result, the average quality will fall even more and the prices offered will collapse further, after which even more people offering relatively good cars will turn their backs on this market. The result is a market in which only cars of low quality are offered, with potential buyers that not prepared to pay much for a car”.

Moral hazard is the behaviour of the agent after the adoption and the coming into effect of the arrangement. In its behaviour, the agent manages to evade the arrangement, at any rate in part, which, generally speaking, will harm the principal's interest. It will succeed in hiding some of its actions from the principal (hidden actions). Moral hazard is a well-known phenomenon in the world of performance measurement. The actor (agent) to whom the performance agreements apply will make sure it receives a flattering assessment through hidden actions, even though this performance is less satisfactory on closer inspection.

### ***Strategic behaviour in investments in infrastructures***

#### ***Classic paradigm***

*Adverse selection* manifests itself through sub-optimal decisions about investments in infrastructure. Here the selection of projects is neither optimal nor is the level of investment and/or their timing good, etc. A bias in the decision making regarding public investments is that the source of the money is vague. It comes from the taxpayers, while the infrastructure revenue accrues selectively to its operators and owners. Because the origin of the revenue is diffuse, the forces critical of the investment will not be passionate and will therefore be weak. However, the proponents *will* be passionate. The result too often may be that positive decisions are made about investments. Empirical indications of the validity of this assertion can be found in the systematic and frequent overestimations of the demand for infrastructure capacity and the underestimations of the costs of developing the infrastructure (Flyvberg forthcoming). All this is to tempt parliaments and governments to make substantial investments in infrastructures. The same effect is visible in a survey of Japanese projects, where “excessively optimistic demand forecasts and construction cost projections” also appeared (Berg, Pollit and Tsuji 2002: 4). These tendencies are confirmed by bureaucracy theories that “suggest that government officials tend to focus on objectives such as maximizing the size of their budget rather than on efficiency maximisation” (Niskanen 1968). This behaviour usually results in overinvestment.

In the classic paradigm, the parties that benefit from this overinvestment are usually owned by governments. They will lobby for these projects, but perhaps somewhat less intensively than private parties would. On the other hand, in the classic paradigm, no critical regulators are actively viewing the forecasts of those concerned with a healthy suspicion. In the classic paradigm, the bureaucratic effects will be felt because the incentives for curbing bureaucratic growth are limited. The conclusion is that, in the classic paradigm, adverse selection points to overinvestment.

*Moral hazard* occurs once the arrangement has been adopted. The agent uses its information advantage to serve its own interests even after the arrangement has been adopted. *Hold-up* is an example of this. Hold-up problems can arise in both the private and the public sectors “when one party can take advantage of changing circumstances to increase the cost to the other party if situations arise that are not specified carefully in the original contract” (Pollitt 2002: 80). After the investment, investors are relatively powerless against parties that decrease capacity because of the *sunk* character of their investment. These parties can impose requirements on the supplier of the capacity because they know that it is faced with *sunk investments*.

Regulators overseeing the prices of the infrastructure can display similar behaviour. They can impose low prices on the infrastructure operator once it has made the investment.

Investors will anticipate such hold-up behaviour and invest less because of this risk. The conclusion is that moral hazard in itself is an incentive for cautious investment. However, in the classic paradigm the infrastructure operator can usually expect its investment to be profitable. The regulator, if any, will not readily cut off the operator from a reasonable return. Should this nevertheless happen, it will affect the central funds and rarely keep the investor from investing.

The overall conclusion is that adverse selection points in the direction of overinvesting and that moral hazard points in the other direction, with the incentive for overinvestment looking significantly stronger.

### ***New paradigm***

To what forms of strategic behaviour will information asymmetry lead in the new paradigm and what consequences will this have?

*Adverse selection* If private parties are fully responsible for the investment in the infrastructure, there will be less adverse selection. A private investor will be fully aware of the long-term risks it runs, which will less easily lead to overinvestment than in the old paradigm. However, in a large number of cases the new paradigm will also demand a commitment from public parties. This commitment may take the shape of a public-private partnership in which public and private parties invest in an infrastructure shoulder to shoulder. A lighter form of commitment

involves the private party asking a public party for certain guarantees, e.g., in the form of a cover for long-term risks or regulations guaranteeing the private party a *de facto* monopoly position. In these cases, there is a high risk of adverse selection. In such situations, the private party can tempt the public party relatively easily to take measures that greatly favour the private investor. This temptation is highly likely to succeed because of the private party's information advantage. In the PPP construction, this may manifest itself in, for example, a representation of the costs of a project that is too rosy. When the costs become a rude awakening during its implementation, the government ends up being "up to its neck" into the project and there will be no turning back, which makes this public party the *de facto* hostage of the private party (Kagami 2002).

The new paradigm has two arrangements to mitigate this risk:

### **Competition**

The government can play competing parties off against each other, which may include the information they provide. Organizing a competitive process in the tender phase allows the government to extract a lot of information from the parties. The tender-inviting government can compare, analyse and combine this information, which enables it to make up for part of its information disadvantage.

### **Regulation**

A regulator can be charged with assuring the quality of the information provided to the government. This regulator constantly monitors this industry, particularly if it can build up a valuable information base, which also enables the government to overcome part of its information disadvantage. The conclusion is that, although the incentive for overinvesting contained in adverse selection is present, it is less dominant than in the classic paradigm.

### **Moral hazard**

In the new paradigm, moral hazard will have two faces:

*Regulatory opportunism* (Guthrie 2006). The essence of regulatory opportunism is that the regulator puts pressure on the company after the investment has become definitive and is sunk. The company will have little room to move and is defenceless against a regulator that leaves too little room in the tariffs that it considers permissible for the operator of infrastructure to charge to the infrastructure users. This frequently occurs in the world of infrastructures because the depreciation periods are very long and the regulator therefore has to permit disciplined high tariffs for a very long time. "This creates commitment problems for regulators" (Guthrie 2006: 940).

This regulatory opportunism is, of course, not without risks because of the reputation effect. This behaviour may cause other investors in other infrastructures, for example, to think twice before they invest and the stricken investor will not be inclined to invest a great deal in the innovation of the infrastructure. "The key observation is that the possibility of opportunism will affect investment even when the possibility is not realized" (Guthrie 2006: 954).

*Business opportunism.* Companies, too, can show opportunistic behaviour. First, the infrastructure operator can behave opportunistically. It can, for example, conceal information about its cost structure, thus exacting higher tariffs than is strictly necessary. A second category of companies is the service providers. Since unbundling, they have been independent of the infrastructure operator. These service providers have to pay a fee to the infrastructure operator for the use of the capacity. Once the investment in the infrastructure is made, the service provider can put pressure on the infrastructure operator to accept a low fee, again because of the sunk nature of the investment. This risk rapidly decreases if there are numerous service providers that compete with each other to gain capacity on the infrastructure.

Both regulatory opportunism and business opportunism incentivize the investor to invest with caution. This may lead to underinvestment. This incentive to underinvest is stronger in the new paradigm than it is in the classic paradigm.

### 5.3.5 SOURCE 3: POSITION

#### **Position**

Position is an important issue in the game between actors, and a great deal of strategic behaviour is aimed at obtaining a good position, retaining one or manoeuvring the opponent into a bad position. Once an actor has a strong position, it is relatively easy to win concrete advantages. So the positional game always involves at least two moves: gaining the position and capitalizing on it.

The battle for the good positions is very strategic because no directly visible advantages are attached to it. The position in itself does not create direct gain. This makes it very difficult to prove that the strategist playing a positional game is merely acting in its own interest, because the strategist can always point out that it is not benefiting from it. The advantage only materializes in a later phase. So much later that it is often problematic to establish a direct link between the positional game in an earlier phase and the material profit later. The fact that this link is so difficult to establish makes the positional game attractive.

What is an attractive position in a market? I distinguish two strategically interesting positions here. The first is that of the enterprise that already occupies a position in the market and thus has an advantage over newcomers, which it can exploit. The second is that of a newcomer (entrant) that tries to gain a position in an existing market. This position, too, may have its advantages.

Governments, competition authorities and regulators whose aim it is to introduce more competition into a particular market seek to create a level playing field. The reasoning can be summarized as follows. In a market with too little competition, the monopolist and the oligopolist manage to realize revenue for themselves that is higher than desirable. They charge prices that are higher than the marginal costs they incur. Potential entrants know this and therefore see good possibilities

for themselves. They could offer their products below the price of the vested competitors – because these prices are relatively high – but still above the marginal costs they incur. However, this reasoning only applies if there is a level playing field. If that is not the case and the vested companies have an advantage over newcomers, the potential entrant will first have to incur costs to compensate for that advantage. It remains to be seen, however, to what extent it can see an attractive return for itself. In such a situation, vested companies can always continue to make a return that exceeds the return in a really open market.

It is not easy to create such a level playing field in formerly monopoloid or oligopoloid markets. One reason why the playing field is not level is that the former monopolist or oligopolist has a considerable advantage over the newcomers in the market. It has the technology and knows the sales market. It enjoys what is known as “experience-related cost advantages” (Gilbert 1989: 495). These advantages result from “learning by doing”. Many studies show that, *ceteris paribus*, a longer presence in the market leads to lower production costs.

This alone puts the potential entrant at a disadvantage and makes it difficult to realize a level playing field. This problem becomes even more difficult if the former monopolist deliberately hampers or delays the realization of the level playing field. Emmons demonstrates that the players in the world of infrastructures play their strategic game in two arenas: that of the market and that of the politicians (Emmons 2000; Wubben and Hulsink 2003). The incumbent has an advantage particularly in the political arena. It knows the actors in the political arena and has access to the media. The politicians tend to value the continuity of the vested companies because these incumbents are traditionally national companies, to which the politicians are in a certain sense attached. In the political game, the incumbent will have many opportunities to halt or delay the realization of the level playing field, or deflect it in such a way that the game in the market becomes easy for it.

On the other hand, the (potential) entrant is not always by definition the victim. The newcomer, too, has possibilities for strategic behaviour. It can behave so, for example, by presenting itself as the underdog and appealing to politicians and the media to give it a fair chance. Read: to obtain advantages that put it in a more favourable position than the vested companies. A second way of manoeuvring itself into a favourable position is for the entrant to evade commitments that the vested companies have undertaken in the past. These may be commitments aimed at realizing specific public interests. The new paradigm tellingly calls the costs this entails “stranded costs” (Sidak and Spulber 1998). At the time, these companies lightly undertook this commitment because they would be able to pass on the costs, against a background that the market would remain closed to new entrants. But a newcomer that does not have this commitment and consequently does not incur these costs and thus enjoys an advantage that it can exploit.

**Position and strategic behaviour**

Companies that occupy a comfortable position in the market as monopolists or oligopolists and wish to retain this position have a range of strategic behaviours available to them. Most of these strategic behaviours are forms of predatory behaviour. Predation is any form of threat by incumbents to behave aggressively towards entrants with the aim of preventing their entrance (Bos 1995). However, not every threat has the automatic effect of potential entrants abandoning their plans to enter the market, because entrants know that not every threat will be executed. Realizing the threat may be unattractive to the incumbent and the potential entrant knows this. For example, the incumbent has to start a price war to oust the newcomer by lowering prices or an intensive marketing campaign to keep its customers from taking their accounts to the entrant. This is expensive and therefore unattractive. It may be far more attractive for the incumbent to regard the entrant as one of the members of the oligopoly after its entrance and involve it in the collusion. The potential entrant will of course anticipate this pragmatic and adaptive behaviour and ignore the threat. The threat will thus lose its effect. A threat therefore only makes sense if its execution is *credible*.

A threat is credible if the established firms invest in the execution of the threat (Spence 1977) visibly (Ordover and Saloner 1989) and irrevocably prior to the entrance (Fudenberg 1983). What matters here is that it is clear to the potential entrant that this investment influences the “post-entry marginal cost curve” in such a way that the incumbent only needs a minor investment to crack down on the entrant after its entrance (Dixit 1980). Credible threats arise by investing beforehand and making this visible to the outside world. This often leads to overinvestment.

However, overinvestment does not always generate the right credible threat. In some cases, such an investment undoes the incentive to actually react aggressively to the entrant after its entrance. To avoid this “fat-cat effect”, the incumbent will underinvest so as to take on a “lean and hungry look”, which also expresses considerable threat (Fudenberg and Tirole 1983).

Many forms of predatory behaviour are mainly financial. Nevertheless, there are also other forms of strategic behaviour. Examples include predatory product innovation, where the incumbent threatens to put an innovation on the market that the entrant is unable to duplicate. If a potential entrant markets products that should somehow be compatible with products that the incumbent is marketing, the incumbent may threaten to hamper the compatibility of the products that the entrant will supply. This may be a reason for hesitant customers to continue their custom with the incumbent. A variant of this is that the incumbent ensures that customers who want to switch will face high switching costs (Gilbert 1989). This, too, may pose enough of a threat that the potential entrant abandons its plans for entrance.

Not only the vested companies can use their position strategically in how they behave. Newcomers also have the ability to display strategic behaviour. Two

examples of this are: Newcomers can present themselves as underdogs. They can position themselves as a company that is attacking the established order and calling it into question. By so doing, they claim the support of those consumers who would like to see a change and that are spontaneously inclined to offer innovating forces, the benefit of the doubt and support them by becoming their customers.

A second strategy is cream skimming or cherry picking (Graham and Marvin 1994). In the past, vested companies have often made concessions to consumer organizations and government organizations to also serve those sectors of the market that are commercially less interesting. Examples would be low-income groups or consumers located in geographically peripheral locations. They were easily able to do so at the time, because they were able to divide the costs among their other consumers. Although the latter group had to pay higher prices, they “did not know any better” because there was no competitor to offer them lower prices. However, an entrant is in a position to ignore this. Entrants can focus on those segments of the sales market that are commercially attractive, leaving the less attractive segments to the incumbent.

### ***Strategic behaviour in investments in infrastructures***

#### ***Transition from the classic paradigm to the new paradigm***

Position is mainly taken advantage of in a transition situation. Mentioned below are a number of strategies relating to investment in infrastructures during the transition from the classic paradigm to the new paradigm.

#### ***Predatory behaviour***

An incumbent that operates an infrastructure has several options regarding predatory behaviour. It may deter potential entrants by offering the capacity of its infrastructure to its buyers more cheaply. It can do so because the depreciation period of the infrastructure is extremely long, which offers many possibilities for compensating this gesture over the course of time by means of higher prices in a later phase.

When a new infrastructure operator enters the market, an important point of discussion will be the interoperability, i.e., the two infrastructures will have to be compatible. The service providers will have to be able to develop their services on both infrastructures and the consumers buying these services should eventually not be inconvenienced by the fact that the services will have been transported over different infrastructures. In this inter-operability discussion, the incumbent is in a comfortable position. Obviously, the standards it uses and to which the service providers are accustomed will be the standards for inter-operability to which the entrant will have to adapt. This has a deterrent effect on newcomers.

“Incumbents could potentially upgrade their networks in a number of different technical ways” (Cawley 2007). Depending on the nature of the upgrade, this

may have significant implications for the ease with which competitors can obtain local access, and the type of access (unbundled or otherwise) that can be made available. If incumbents invest in fibre, local monopoly could be re-established and investments in competing networks stranded. Conversely, the expectation of tough regulation could discourage investments by all. The investment is a credible signal that it will respond aggressively to any attempt to take part of its share of the access market”.

### ***Vertical foreclosure***

In a number of industries, the infrastructure operator is related to a service provider. In a few cases, the infrastructure operator and the service provider are identical; in other cases, the relation is less close. Then there are two companies, both of which form part of the same holding company, or they are two separate companies that, in whole or in part, have the same shareholders. In all cases in which the infrastructure operator has an interest in a service provider, the infrastructure operator will have options to favour its service provider through the characteristics of its infrastructure. It may do so by offering its own service provider low tariffs for the use of the infrastructure capacity whilst not granting the entrant such an advantage. A variant of this is to shape the infrastructure in such a way that the service provider has to make technical provisions that favour the service provider that is related to the infrastructure operator. High interconnection tariffs will affect both its own service provider and the entrant, but these tariffs may eventually benefit the vested service provider through the infrastructure operator’s funds. Of course, this does not apply to the entrant.

A third example of strategic behaviour in the form of vertical foreclosure is that the infrastructure operator solves capacity problems that demand a real-time solution, e.g., in the event of a delay, to the advantage of “its” service provider.

### ***Cherry picking***

The entrant also has advantages that it can exploit by means of strategic behaviour. In the past, the monopoloid infrastructure operator has made investments, many of which were not profitable in themselves. For example, it has built an infrastructure that provides coverage for the whole country. It was willing to do so because, as a monopolist, it was able to pass on the costs. It may also have made investments in the infrastructure for political aims, for example, investing in experimental technology or in environment-friendly technology, which are not profitable either, but for which it was allowed to pass along its costs. However, by the time that newcomers are allowed to build their own infrastructures, these investments begin to take on a completely different overtone, becoming, in effect, cost disadvantages for the incumbent. These investments are now “bricks”. The entrant can gain a cost advantage by investing only in attractive regions and/or for attractive target groups and/or in attractive product/ market combinations.

The conclusion is that predatory behaviour in itself can lead to many investments. This is a *credible threat* to potential new competitors, who might be deterred by it. Vertical foreclosure can lead to both more and/or less investments. Cherry picking will prejudice investments in infrastructures.

## 5.4 SUMMARY AND CONCLUSIONS REGARDING STRATEGIC BEHAVIOUR

### 5.4.1 SUMMARY OF STRATEGIC BEHAVIOUR INVESTMENTS IN INFRASTRUCTURES

Table 3 shows what forms of strategic behaviour surrounding investments in infrastructures can be expected in the classic paradigm and what can be expected in the new paradigm.

The following conclusion can be made on the basis of this survey. In the classic paradigm, incentives that incite strategic behaviour resulting in overinvestment in infrastructures dominate. Adverse selection and goldplating are particularly relevant in this context.

In the new paradigm, these incentives are weaker. Regulation and competition in particular weaken them. In the new paradigm, there are also incentives that lead to strategic behaviour that results in underinvestment. Asset sweating and hold-up behaviour, in the form of business opportunism and regulatory opportunism, are examples of strategic behaviours that lead to underinvestment.

It cannot be clearly indicated how the behaviours that lead to overinvestment relate to the behaviours that lead to underinvestment. The incentives can be either stronger or less so, depending on the institutional design (regulations, financial incentives, trust) and the concrete market form that has been realized (number of competitors).

However, I should point out here that this does not mean that this over- or underinvestment will actually take place. Of course, other factors are at play that also influence the level of investment and these other forces may compensate for the strategic behaviour, but they may also strengthen each other.

### 5.4.2 CHANGES IN STRATEGIC BEHAVIOUR BY INSTITUTIONAL CHANGES

I have set out above what forms of strategic behaviour can be expected in connection with investing in infrastructures in two different systems. The differences have been strongly accentuated by describing two ideal-typical situations: the classic paradigm and the new paradigm. However, the institutional changes implemented thus far are hybrids of the two ideal types. The question now arises of which strategic behaviours can be expected in the concretely realized situation.

**Table 5.2 Summary of strategic behaviour in the classic paradigm and in the new paradigm**

Source	Classic paradigm	New paradigm
Fewness	<ul style="list-style-type: none"> <li>• Too little infra at too high a price; weak incentive for underinvestment</li> <li>• (Amplly) sufficient capacity at too high a price; strong incentive for overinvestment</li> <li>• Goldplating; strong incentive for overinvestment</li> <li>• Too little, too late; weak incentive for underinvestment</li> </ul>	<ul style="list-style-type: none"> <li>• Too little infra at too high a price; weak incentive for underinvestment, incentive weakened further by regulation</li> <li>• (Amplly) sufficient capacity at too high a price; strong incentive for overinvestment, incentive weakened by regulation and competition</li> <li>• Goldplating; strong incentive for overinvestment, incentive weakened by regulation</li> <li>• Too little, too late; weak incentive for underinvestment</li> <li>• Asset sweating; strong incentive for underinvestment, incentive possibly weakened by regulation</li> </ul>
Information asymmetry	<ul style="list-style-type: none"> <li>• Adverse selection; strong inclination to overinvestment</li> <li>• Moral hazard; neutral</li> </ul>	<ul style="list-style-type: none"> <li>• Adverse selection; strong inclination to overinvestment, weakened by regulation</li> <li>• Moral hazard in the form of hold-up behaviour:                             <ul style="list-style-type: none"> <li>◦ Regulatory opportunism</li> <li>◦ Business opportunism</li> </ul> </li> </ul> <p>Strong incentive for underinvestment behaviour; incentive for overinvestment</p>
Position	<ul style="list-style-type: none"> <li>• Predatory</li> <li>• Vertical</li> </ul>	<p>Foreclosure; incentive for over- and underinvestment</p>

***Institutional changes***

The institutional changes aim to weaken monopolies. Markets are being, or have been, broken down, entry barriers are being, or have been, scaled down or done away with altogether. Vertical relations between companies are being, or have been, cut, as a result of which a strong position in a link in the production chain does not automatically imply a strong position in other links of the production chain.

These changes have had their consequences for the structure of the market and will influence it further. The old vertically integrated monopolies no longer exist

in the energy chain, the telecom chains and in aviation. Changes have also been implemented in the chains of rail transport and bus transport, although these have been somewhat less radical. In the drinking-water chain, little has changed institutionally.

But how far do these changes go? Although most of the old monopolies have disappeared, no really open markets have taken their place. Markets that have opened up have seen rapid consolidation. Many companies have been combined, both on the national and European levels, either through the purchase of shares or through mergers. Alliances have also been formed. This consolidation was not only horizontal, between similar companies, but also vertical throughout the chain, as has been the case in the energy chain. The result is a market with an occasional monopoly and many duopolies or oligopolies, but few polypolies.

On the level of infrastructures, the monopoly is still the dominant market form, with an occasional duopoloid or oligopoloid structure. The infrastructures have remained in public hands, with the exception of the telecom sector. The infrastructure operators have become more autonomous from the service providers. Regulation has become substantially stronger. The overall picture is that the present situation lies somewhere between the classic paradigm and the new paradigm.

### **Strategic behaviour**

*Fewness* For strategic behaviour, this means that the strategic behaviour of the monopolist is a strategy that is here to stay, particularly in the energy, transport and drinking-water sectors. In the telecom sector, infrastructures have been duplicated, or even replicated on a number of levels. This sector should be apprehensive of the dominant game among oligopolists: collusion.

This means that the strategic behaviour for these sectors will not change. In the sectors in which the company operating the infrastructure has become more autonomous from a government (rail, energy) or has even been privatized (telecom), the strategic behaviours that accompany the monopoly or oligopoly may be expected to be employed more thoroughly. This is because the incentive structure in autonomous companies and private companies is such that the release of the revenue from these behaviours will be less diffuse than it used to be. In other words, the number of parties that benefits from them is smaller than it used to be, which will incentivize them to actually and consistently display this behaviour. This is partly compensated for by stronger regulations than there used to be and at least some competition, or the threat of competition, through the arrangement of the *contestable market*.

*Information asymmetry* Companies retain their information advantage over the regulator and the government even after privatisation and liberalisation. But the introduction of competition in particular may somewhat reduce the information gap. A configuration with several companies doing more or less the same offers

the regulator and the government an opportunity for benchmarking. This compares the performances of companies using a variety of variables. An intelligent government or regulator sees this as an opportunity to make up for part of its information disadvantage.

The separation of roles in the new paradigm also offers good opportunities to make up for the information disadvantage. In the new paradigm, we can usually distinguish the following three roles: investor, regulated enterprise and regulator. The enterprise wants to report low costs and high profits to the capital market, but high costs and low profits to the regulator. Of course, this dilemma for the enterprise offers the government and the regulator many opportunities to obtain valuable information, which again helps to make up for the information disadvantage. In the case of big investments, the enterprise probably wants to primarily arm itself against the regulator (Spiegel and Spulber 1994).

The hold-up problem might become more serious after privatization and liberalization. Investors are less certain than they used to be about whether they will still be the infrastructure operator after a long period of time. In the absence of accompanying measures, this uncertainty may adversely affect its willingness to invest in the infrastructure. Even if it does have some assurance on this point, it may be uncertain about the future prices that the regulator will permit. The possibilities for regulatory opportunism may lead to a fall in investments.

Many of the vertically integrated, monopoloid companies see the institutional changes as a worsening of their positions. Because they no longer operate the service offered over the infrastructure, they will be uncertain about whether service providers will, in the distant future, wish to use their infrastructure and, if so, whether they will be willing to pay a good price for it. This business opportunism may also lead to underinvestment.

*Position* The former vertically integrated enterprises have seen their comfortable position as monopolists come under fire. This change incentivizes behaviour that is aimed at retaining their positions. The positions themselves offer numerous opportunities to actually display this behaviour. Predatory behaviour and vertical foreclosure in particular are the corresponding strategic behaviours. This may manifest itself in investments or overinvestments in the infrastructures, signalling that they will put up a tough fight against newcomers. These high investments are *credible threats* against potential newcomers. Wherever possible, the entrants will engage in cherry-picking behaviour, which may lead to lower investments in infrastructures because the threat of cherry picking will decrease the zest for making unprofitable investments.

### **Conclusion**

Because the present situation is halfway between the classic paradigm and the new paradigm, strongly resembling the classic paradigm, particularly in terms of the link between infrastructures, no drastic change in strategic behaviour is

expected. The incentives for overinvestment have weakened a bit; the incentives for underinvestment seem to have been strengthened. Overall, the changes have led to strategic behaviours that trigger slightly less overinvestment than in the past. However, overinvestment remains a risk. For a number of behaviours, the risk is underinvestment (hold-up and asset sweating). The concrete result will depend on the regulation strategy, on how the market develops and to what extent parties continue to trust each other.

In fact, this conclusion is an expectation, nothing more of course. There are few empirical data yet to examine the extent to which this expectation matches the facts. The UK is an interesting country in this context. Since the Thatcher government, the UK has been a European leader in privatizing and liberalizing the infrastructure markets and it is interesting to see to what extent the changes initiated there have led to other investment behaviour. Pollitt has made a comparative analysis of the investments in infrastructure in a period before the institutional changes and the period after them. He has mapped the investments per year in the period from 1981 to 1999 in the railway, airport, water, telecoms, gas and electricity infrastructures. The UK transferred at least 7% of GDP from the public sector to the private sector (Pollitt 2002). Most utility privatizations came at a time when the physical infrastructure was beginning to crumble (especially in water and railways), EU directive compliance costs were rising (particularly in water), and rapid technical progress was leading to new investment requirements (notably in electricity and telecoms).

His conclusion: "... privatization seems not to have much effect on the aggregate amount of investment in these industries." (Pollitt 2002: 70). The reason for this gradual transition is that the industries are subject to RPI-X regulation, which involves a four- to seven- year review period over which prices are set. Allowed prices are set with reference to the detailed investments plans of the regulated companies. Paradoxically, the need to submit medium-term investment plans subject to ex post explanations when goals are not met has led to highly smoothed and predictable patterns of investment in these industries. Investment has not fluctuated as it might do in an unregulated environment in the private sector, or equally as it might do in response to short-term government budgetary constraints. It may be the case that "goldplating" of assets (following the Averch-Johnson effect; Averch and Johnson 1962) may be encouraged by utility regulation. However, the statistics do not suggest a large surge in the amount of investment occurring in privatized industries (Pollitt 2002: 71). Privatization in the UK has led to a change in the technology mix on the network; "today, new plant is more likely to be gas-fired than coal-fired. While this shift might have eventually occurred under public ownership as well, records of the industry's investment plans just prior to privatization indicate that the growth of gas-fired generation would not have begun so early".

### ***Overinvestment and congestion nevertheless?***

Both paradigms contain incentives for strategic behaviour that results in overinvestments. These incentives are stronger in the classic paradigm than in the new

paradigm. However, an analysis of the use of infrastructures shows no surplus of capacity. On the contrary, infrastructures are permanently overused. The rails are full, the motorways are full, the energy networks are full, etc. However, telecoms are an exception. At the backbone level, there is considerable overcapacity and private parties have made big investments in the UMTS frequencies, which are unlikely to be profitable.

How can the fact that so many infrastructures seem overused be reconciled with the prediction that there will be overinvestments? Two explanations are conceivable. The first explanation lies in the poor market mechanism. The infrastructure capacity is offered too cheaply to the infrastructure users. The usage fee for the railway system is much lower than its costs. The fee for using the road is zero in the motorist's perception. Because the price of the roadway infrastructure seems so low, the infrastructure is used too intensively. The second explanation might be that there are other forces that point in the direction of underinvestment, which more than compensate for the incentive to overinvest. This may, for example, be due to the fact that many investments made by the government are traded off against other expenditures that might be more directly and clearly relevant.

#### ***Overinvestment problematic?***

How problematic are overinvestments? In the first place, infrastructures have many positive external effects on the economy as a whole; it may be a good thing that the use of infrastructures is so cheap. This stimulates their usage, which has many positive external effects for the economy as a whole. This reasoning can easily lead to the conclusion that it is not bad at all for the economy as a whole that there are incentives that lead to overinvestment in infrastructure, because this eventually results in positive economic effects, be it rather coincidentally.

Nevertheless, risks are also attached to this form of overinvestment. Overinvestment 'costs money' and the advantage of the positive external effects should be traded off against the extra costs they entail. Could other investments be preferable instead? Secondly, overinvestment may hamper innovation. The bigger the investments, the more difficult it is to break new ground in an infrastructure.

## **5.5 POTENTIAL SOLUTIONS**

The preceding chapter has shown that incentives exist in the classic paradigm that incite strategic behaviours that result in overinvestments. Monopoloid behaviour that incites high prices, combined with bureaucratic measures and goldplating, is responsible for this. In the new paradigm, these incentives for overinvestment also exist, albeit in a weakened form. This is due to the introduction of competition, albeit to a very limited extent on the level of infrastructures, and the increased importance of regulation. In the new paradigm, hold-up behaviour in the form of business opportunism and regulatory opportunism may also lead to underinvestment.

How can this behaviour be tempered? What type of interventions can help to decrease the incentives for strategic behaviour, increasing the chance of societally optimum investments?

Below we present an exploration of possibilities. Two obvious arrangements are regulation and financial arrangements. I will discuss them briefly. We will find that these arrangements stand little chance of success in an isolated form.

### 5.5.1 REGULATION

To what extent can strategic behaviour be countered with laws and regulations? Can the optimal level of investment in infrastructures be enforced by legislation? In this section, I explore to what extent this is possible with the help of legislation framed unilaterally, by a central government, with 'command and control' laws. However attractive this option may seem from a number of perspectives, command and control laws are seldom able to adequately counter strategic behaviour and enforce the desired investment level. The reasons are the following:

- Infrastructures have an extremely long depreciation procedure. Any applicable law would have to be laid down matters for a very, very long period of time. The technical and economic dynamic for this duration cannot be foreseen and 'freezing' in a text of law would therefore not be appropriate and create a deceptive appearance of certainty.
- The legislature would be at an information disadvantage at the time it drafts and adopts the text of such a law. Because of this disadvantage, it is almost certain that the law will not contain the optimal arrangement (adverse selection).
- Even the law, once it has passed, offers an opportunity for strategic behaviour. Actors can manipulate information and conceal their actions (moral hazard). This would make enforcing the law problematic.

### 5.5.2 FINANCIAL ARRANGEMENTS

Financial arrangements match the new paradigm. The central mechanism in the new paradigm is the market and financial arrangements are a logical part of it. Nevertheless, these arrangements are also sensitive to strategic behaviour. This proposition can be explained using three common financial arrangements:

#### **Price caps**

The essence of price caps is that the prices are regulated for a certain period. This creates an incentive for the infrastructure operator to minimize costs, which may lead to eventual underinvestment (Guthrie 2006).

#### **Rate-of-return regulation**

The essence of rate-of-return regulation is that the infrastructure operator is allowed a particular return on its investments. Of course, in a configuration of fewness this is an incentive for overinvestment.

**Performance contracts**

Here, too, the government has an information disadvantage, the consequences of which it faces when it draws up the performance parameters, when filling them in and when monitoring the performance.

The conclusion is that financial arrangements alone cannot temper strategic behaviour. On the contrary, they actually invite new forms of strategic behaviour.

**5.5.3 SOCIETALLY OPTIMAL INVESTMENTS IN INFRASTRUCTURES**

All decisions about investments are difficult. There are always uncertainties that involve future technology developments, the market in the future, particularly in the distant future, as well as returns in the future. Investments always carry risks. Three specific problems are featured in the uncertainties and risks surrounding investments in infrastructures:

- The long depreciation period of the investment. The investment is made over a period of decades, which increases the uncertainties and the risks because a long period of this kind requires assumptions about the development of the demand for infrastructural capacity, developments in technology, the behaviour of competitors, the development of regulations and the dynamics of regulation.
- The sunk character of the investments in infrastructure. The investment can barely serve any other aims than the original ones. This raises the pressure posed by the long duration of the investment.
- The public interest of the infrastructure, which causes uncertainty regarding its effect not only on the both the producer and consumer surpluses, but also the positive and negative external effects now and in the distant future.

In the classic paradigm, these uncertainties and risks were combated with the following arrangement. In exchange for its investment, the infrastructure operator was given:

- the guarantee that it would be the only operator for a long time, i.e., that it would be the monopolist.
- the possibility to also be the service provider via shareholding in the service provider. The infrastructure operator was also assured that it could sell its infrastructure capacity.
- the government as *hostage*, because the government was a shareholder, which made it unattractive for the government to behave opportunistically towards the investors.

On the one hand, this arrangement created sufficient certainties for investing; on the other hand, this was an 'expensive' arrangement, with high costs, little innovation and a low orientation towards the infrastructure users.

In the new situation, these certainties have disappeared. The guarantee of a 'perpetual' monopoly no longer exists. Because of unbundling, the infrastruc-

ture operator is no longer assured of the ability to sell off the capacity of its infrastructure. In most cases, the government is still intensively involved in funding infrastructure. In other words, the sector has been unbundled and thus the infrastructure operator is on its own, more than it used to be, and has to manage the uncertainties and risks more or less on its own.

This creates an arrangement with strongly divergent incentives for the investment in infrastructures. On the one hand, the infrastructure operator still has the prospect of a favourable position as a monopolist or duopolist; on the other hand, it runs greater risks because of hold-up behaviour. The first incentive incites it to invest, perhaps to overinvest; the second incentive hampers it in its investments, which may lead to underinvestment.

What is the solution? There are two potential solutions for the possible problem of overinvestment. First, there is the introduction of competition, or the threat of competition, in the form of a contestable market. The danger here is the problem of collusion. Second, there is regulation; here, it is important for the regulator to make up for its information disadvantage compared to the monopolist. Both arrangements reduce the risk of overinvestment.

The following basic assumption is important for the problem of underinvestment. The infrastructure operator should expect a good return, in the short term but also in the very long term. Basic principles for reasonable cost compensation are:

- “A regulated firm should be compensated for its total cost, rather than just its investment expenditure, so that the rate base should include the (opportunity) cost of real options destroyed by investment” (Guthrie 2006: 958).
- The reasonable cost compensation should be higher after unbundling. Suppose the investor invests successfully in the infrastructure, making it more attractive for service providers to use. The demand for access will then be greater. The regulator will see to it that the infrastructure operator does not abuse its position as a monopolist towards the service providers and will force the operator to ask cost-price-oriented tariffs. The return on investment may then be good, though not excessive.

But what happens if the investment fails? In this situation, there will be no demand for access and the investor will earn no return. “Put simply, investors will bear all the down-side risk of the investment and face a truncated up-side return due to access regulation” (Gans and King 2003: 163-178). The solution here may be the introduction of an “*access holiday*”, which is “a period of time under which an investor would be free from access regulation. Access holidays provide a way to overcome regulatory risk and to improve investment incentives for essential infrastructure” (Gans and King: 163-178). However, politically it is very difficult to give a successfully investing monopolist an *access holiday*. This may create the impression that a monopolist has been allowed to make exorbitant profits on its successful investments (Guthrie 2006). But it is good to remember that it is this very *access holiday* that tempts investors to make such an investment.

The long-term risks are serious and demand solutions of a different kind. "The underinvestment theme has inspired a vast literature, within which contracts and governance structures are seen as mitigating the hold-up problem by empowering the investor" (Williamson 1975; 1985). The risks attached to the new paradigm on this point can be mitigated by again creating relations between the actors involved, but without creating new monopolies or reintroducing vertical integration. In other words, the structural unbundling of the new paradigm should not be undone, but a new type of bundling should develop between the infrastructure operator and other parties. In the literature, the concept of *hostage*<sup>3</sup> was introduced to describe this situation. Parties allow one another to take hostages. This creates dependencies, letting the parties treat each other more prudently and – in a joint process – more easily develop arrangements in which they jointly identify risks and reach agreements in which the parties bear the risks that they can bear most easily. All of the involved parties will have to make concessions here. "To be credible, regulators need to visibly reduce their freedom to manoeuvre, or write contracts that are credible" (Cawley 2007) and risk-sharing access seekers should be willing to commit themselves for a very long period of time or they should pay a premium for the risk (Guthrie 2006).

A potential solution that fits the Dutch tradition and matches the emerging hybrid institutional ordering (a hybrid of the classic paradigm and new paradigm) is that the parties involved (governments, regulator and service providers) together map the uncertainties and risks, for example, by outlining scenarios that all parties regard as possible and somewhat realistic. This may reduce the incentive to overinvest, which is present in both the classic and new paradigms. The process in which parties map uncertainties and risks could be moulded in the form of a joint and widely supported real-options analysis. The parties should negotiate the various parameters and links in such an analysis. Moreover, analyses of the positive and negative external effects should also be conducted. These effects, with their corresponding uncertainties, risks and opportunities, should also be identified and, where possible, quantified in a process with the actors involved.

The government should then invite potential investors and infrastructure operators to study these analyses and submit their own ideas regarding the infrastructure. These ideas should then be used to supplement and enrich the analyses. This gradually clarifies the existing uncertainties, risks and opportunities. The parties should then examine who can best deal with what risks and who can best use what opportunities. Other parties will always have to help reduce risks, for example in the form of long-term contracts, regulations that in theory do not change, protected positions as monopolists and duopolists, and joint investments, etc. All this together will reduce the risk of hold-up behaviour.

## NOTES

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- 2 Williamson; J.G. Sidak, D.F. Spulber (1998) *Deregulatory Takings and the Regulatory Contract. The Competitive Transformation of Network Industries in the United States*, Cambridge: Cambridge University Press, p.104
- 3 Williamson; P.L. Joskow (2002) 'Transaction Cost Economics, Antitrust Rules, and Remedies', *The Journal of Law, Economics and Organization*, vol. 18, no. 1: 95-116, p. 96.

## LITERATURE

- Akerlof, G.A. (1970) 'The market for "Lemons": Quality, Uncertainty and the market Mechanism', *Quarterly Journal of Economics*, vol. 84: 488-500.
- Averch, H. and L.L. Johnson (1962) 'Behaviour of the firm under regulatory constraint', *American Economic Review*, vol. 52: 1052-1069.
- Baron, D.P. and R.B. Myerson (1982) 'Regulating a Monopolist with Unknown Costs', *Econometrica*, vol. 50: 911-930.
- Baumol, W. J., J. C. Panzar and R. D. Willig (1982) *Contestable Markets and theory of Industry Structure*, San Diego: Harcourt Brace Jovanovich.
- Berg, V.V., M.G. Pollitt and M. Tsuji (2002) Introduction: 1-13, in S.V. Berg, M.G. Pollitt and M. Tsuji, *Private Initiatives in Infrastructure. Priorities, Incentives and Performance*, Cheltenham: Edward Elgar.
- Bos, D. I. (1995) *Marktwerking en Regulering: theoretische aspecten en ervaringen in Nederland en in het buitenland* (Competition and Regulation: theoretical aspects and experiences in the Netherlands and abroad), OCFEB, Rotterdam.
- Cawley, R.A. (2007) *The New Approach to Competition Regulation in the Network Infrastructure Industries*, dissertation, University of Delft.
- Crozier, M. and E. Friedberg (1980) 'Actors and Systems, The politics of collective action', *Political Science Quarterly*, vol. 96, mo. 3 (Autumn, 1981): pp. 530-531.
- Dijk, T. van. (2008) 'Regulation and investments in infrastructures', in this volume.
- Dixit, A. K. and B.J. Nalebuff (1991), *Thinking Strategically, The competitive edge in business, politics and everyday life*, New York: W.W. Norton & Company.
- Dixit, A.K. (1980) 'The role or investment in entry deterrence', *The Economic Journal*, vol. 90: 95.
- Emmons, W. (2000) *The Evolving Bargain: Strategic implications of deregulation and privatization*, Boston MA: Harvard Business School Press.
- Flyvbjerg, B. (forthcoming) 'Public Planning of Large Infrastructure Projects: Overestimation of Demand and Underestimation of Costs, An International Comparison of Issues and Lessons', in H. Priemus, B. Flyvbjerg, B. van Wee (eds), *Development and Management of Large Infrastructure Projects*, Cheltenham: Edward Elgar.
- Fudenberg, D. and J. Tirole (1989) 'Noncooperative Game Theory for Industrial Organization: an introduction and overview': 261-305, in, R. Schmalensee and R.D. Willig, *Handbook of Industrial Organization*, Amsterdam: Elsevier Science Publishers.
- Fudenberg, D. and J. Tirole (1984) 'The Fat-Cat Effect, The Puppy-Dog Ploy, and the Lean and Hungry Look', *American Economic Review*, vol. 74, no.2: 361-66.
- Fudenberg, D. (1983) 'Capital as a Commitment: Strategic Investment to Deter Mobility', *Journal of Economic Theory*, vol.31, no. 2 (December 1983): 227-250.
- Gans, J. and S. King (2003) 'Access Holidays for Network Infrastructure Investment', *Agenda*, vol. 10, no.2: 163-178.
- Graham, S. and S. Marvin (1994) 'Cherry Picking and Social Dumping. Utilities in the 1990s', *Utilities Policy*, vol.4, no. 2: 113-119.
- Gilbert, R. (1989) 'Mobility Barriers and the Value of Incumbency': 476-535, in R.

- Schmalensee, R. Willig (1989) *Handbook of Industrial Organization- volume 1-*, Amsterdam: Elsevier BV.
- Groenewegen, J.P.M. (2005) *Designing Markets in Infrastructures*, Delft, 2005.
- Groenewegen, J.P.M. (2004) 'Inzichten uit de institutionele economie' (Insights from the institutional economy) (in Dutch), *Management Accounting* (November 2004): 515-523.
- Guthrie, G. (2006) 'Regulating Infrastructure: The impact on Risk and Investment', *Journal of Economic Literature*, vol. 44, no.4 (December 2006): 925-972.
- Hart, P. 't (2004) 'Tussen onmacht en overmacht: de rol van de volksvertegenwoordiging bij grote infrastructuurprojecten', in H. Priemus (ed), *Grote Infrastructuurprojecten: inzichten en aandachtspunten, achtergrondstudies ten behoeve van de tijdelijke Commissie Infrastructuurprojecten* ('Between impotence and supremacy: the role of parliament in large infrastructure projects', in: H. Priemus, (ed), *Large Infrastructure projects: insights and issues*, background studies for the temporary Infrastructure Projects Commission) (in Dutch), The Hague: 2004.
- Hemerijck, A. (2001) 'De institutionele beleidsanalyse: naar een intentionele verklaring van beleidsverandering' (The institutional policy analysis: towards an intentional explanation of policy change) (in Dutch): 83-95, in T. Abma, R.J. In't Veld, (eds.), *Handboek Beleidswetenschap* (A Handbook of Policy Science) (in Dutch), Meppel: Boom.
- Jamasb, T., P. Nillesen and M. Pollitt (2003) 'Gaming the regulator: A survey', *The Electricity Journal*, December 2003: 68-80.
- Jacquemin, A. and M.E. Slade (1989) 'Cartels, Collusion and Horizontal Mergers': 415-475, in R. Schmalensee, R. Willig (1989) *Handbook of Industrial Organization- volume 1-*, Amsterdam: Elsevier BV.
- Jong, M. de and H. Stout (1983) 'Strategic behaviour and the law: how legal authorities deal with factual strategic behaviour of former monopolists', *International Journal of Technology, Policy and Management*, vol.3, no. 1: 38-55.
- Kagami, M. (2002) 'The Third Sector's Failure in Japan': 30-46, in .S.V. Berg, M.G. Pollitt and M. Tsuji, *Private Initiatives in Infrastructure. Priorities, Incentives and Performance*, Cheltenham: Edward Elgar, Cheltenham.
- Katz, M.L. (1989) 'Vertical Contractual relations': 656-721, in R. Schmalensee and R.D. Willig, *Handbook of Industrial Organization*, Amsterdam: Elsevier Science Publishers.
- Laffont, J.J. and J. Tirole (1986) 'Using Cost Information to Regulate Firms', *Journal of Political Economy*, vol. 94, no. 3 (June 1986): 614-641.
- Leibenstein, H. (1966) 'Allocative Efficiency versus X-inefficiency', *American Economic Review*, vol.56: 392-415.
- Mintzberg, H. (1983) *Power in and around organizations*, New York: Prentice Hall, Englewood Cliffs.
- Neelen, C.H.J.M. (1993) *Principal-agent relations in non-profit organizations- A comparative analysis of housing associations and municipal housing companies in the Netherlands*, proefschrift Universiteit Twente, uitgave Faculteit der Bestuurskunde – University of Twente, Enschede 1993.
- Niskanen, W. A. (1968) 'The peculiar economics of bureaucracy', *American Economic Review*, vol. 58, no. 2: 298-305.

- Ordoover, A. and G. Saloner (1989) 'Predation, Monopolization, and Antitrust': 538-596, in R. Schmalensee, R. Willig (1989) *Handbook of Industrial Organization- volume 1-*, Amsterdam: Elsevier BV.
- Pollitt, M.G. (2002) 'The declining role of the state in infrastructure investments in the UK': 67-101, in S.V. Berg, M.G. Pollitt and M. Tsuji, *Private Initiatives in Infrastructure. Priorities, Incentives and Performance*, Cheltenham: Edward Elgar.
- Ruimtelijk Planbureau (2006) *Wegen naar Economische Groei* (Roads to Economic Growth) (in Dutch), The Hague.
- Scharpf, F. (1997) *Games real actors play, Actor-centered institutionalism in policy research*, Boulder: Westview Press.
- Schelling, T.C. (1960) *The Strategy of Conflict*, Cambridge MA: Harvard University Press.
- Shapiro, C. (1989) 'Theories of Oligopoly Behavior': 330-414 in R. Schmalensee and R.D. Willig, *Handbook of Industrial Organization*, Amsterdam: Elsevier Science Publishers.
- Sidak, J.G. and D.F. Spulber (1998) *Deregulatory Takings and the Regulatory Contract. The Competitive Transformation of Network Industries in the United States*, Cambridge: Cambridge.
- Spence, M. (1977) 'Entry, investment and oligopolistic pricing', *Bell Journal of Economics*, vol. 8, no.2: 534-544.
- Spiegel, Y. and P. Spulber (1994) 'The capital structure of a regulated firm', *Rand Journal of Economics*, vol. 25, no. 3: 424-440.
- Teulings, C., L. Bovenberg and H. van Dalen (2005) *De Cirkel van goede Intenties. De economie van het publieke belang* (The Circle of good Intentions. The economy of the public interest) (in Dutch), Amsterdam: Amsterdam University Press.
- Vries, L.J. de (2006) 'Generation adequacy: helping the market do its job', *Utilities Policy*, vol.15, no. 1 (March 2007): 20-35.
- Wildavsky, A. (1978) 'A budget for all seasons? Why the traditional budget lasts', *Public Administration Review*, vol. 38, no. 6: 501-509.
- Williamson, O.E. (1989) 'Transaction Cost Economics': 135-182, in R. Schmalensee, R. Willig (1989) *Handbook of Industrial Organization- volume 1-*, Amsterdam: Elsevier BV.
- Williamson, O.E. (1985) *The Economic Institutions of Capitalism*, New York: The Free Press.
- Williamson, O.E. (1979) 'Transaction-Cost Economics: the Governance of Contractual Relations', *Journal of Law and Economics*, vol. 22, no. 2 (October 1979): 233-261.
- Williamson, O.E. (1975) *Markets and Hierarchies: Analysis and Antitrust Implications*, New York: The Free Press.
- Wubben, E.F.M. and W. Hulsink (2003) *On Creating Competition and Strategic Restructuring*, Cheltenham/Northampton : Edward Elgar Publishers.

## 6 THE IMPACT OF TECHNICAL CHARACTERISTICS OF NETWORK INDUSTRIES UPON THE GOVERNANCE OF INFRASTRUCTURE ADEQUACY

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### 6.1 INTRODUCTION

#### 6.1.1 THE IMPORTANCE OF INFRASTRUCTURE ADEQUACY

Most network industries play a vital role for society. Therefore, society and government may also be concerned about whether the network industries are capable of delivering the desired performance in the long run. A prerequisite for this is that the *infrastructure* remains adequate in the long term.

For the supply of electricity, new power plants are needed to meet the growth in demand and to replace old units, but these investments would be useless if the capacity of the network were insufficient to transport the electricity to the electricity consumers. The projected thousands of megawatts of capacity of offshore wind farms can only effectively be used by the system users if a connection is made between the offshore wind farms and the onshore grid and if the onshore grid is reinforced at certain locations. Another example is the Randstadrail, the local light-rail connection in the region of The Hague. That infrastructure was not safe, as a number of incidents have shown. Consequently, that infrastructure could not be used for its intended service (public transit) for a period of a year.

At the same time, society also has an interest in ensuring that the capacity of the infrastructure is *not* unnecessarily high, in particular, if society pays the costs of these infrastructures. A public road that remains unused is probably a waste of money. Moreover, if a new link in the rail network is barely used, one could question whether that investment was wise.

Therefore, it is important that the infrastructure of network industries remains 'adequate'. Infrastructure adequacy is (the function) to ensure the long-term ability of the system to meet reasonable demands for the use of the infrastructure under normal operating conditions. Infrastructure adequacy contributes to the reliability and availability of the services that are offered with use of the infrastructure at hand. However, infrastructure adequacy costs money. Therefore, some trade-off must be made in order to determine which investments in infrastructures are reasonable and which are not.

In the past, most network industries had some form of central planning regarding the development of the infrastructure, under some government control. At that time, these network industries, such as telecommunications, electricity, gas, and

railways, were basically integrated monopolies. Consequently, the relevant information and means were in the hands of the ‘responsible actor’, who generally had the possibility of recovering its investments from its captive customer base. Government control of the planning should have prevented unnecessary investments.

### 6.1.2 THE IMPACT OF THE RECENT REGIME CHANGE

In recent years, most of these network industries have undergone a regime change. In the context of this WRR-project, three developments can be identified:

- *commercialisation*: The actors (either public or private) are more and more guided by their private interests (such as profits) rather than the public interest;
- *privatisation*: The transfer of ownership from the public sector (government) to the private sector;
- *stronger focus on economic efficiency*: This leads to the introduction of competition where that is feasible (‘liberalisation’) and tighter economic regulation of activities that remain exclusive (for example, the shift from rate-of-return regulation to incentive regulation).

These developments affect the function of infrastructure adequacy.

Commercialisation and privatisation impact the strategy of the actors involved. Commercialisation leads to a situation where a network company does not aim at satisfying the public interest, but rather tries to pursue its own private interests. That means that government should try to align the private interest of the actor involved with the public interest. An example of such a change is the introduction of ‘quality regulation’ (see Ajodhia 2006) for electricity distribution networks. The idea behind quality regulation is that distribution companies receive the (public) ‘value’ of additional quality, so that they can assess whether an increase in quality is cost-effective. Their private interest (profit maximisation) would – in an ideal case – lead to a quality level that is in the public interest.

Privatisation may have an effect upon the strategy of the actors that are involved in the infrastructures. It is imaginable that private owners may expect other results from the infrastructure company than public owners. Privatisation could reinforce the development of commercialisation in that the private interest of a company becomes more prevalent. Another issue is the time horizon of the owners of the company in relation to investment in infrastructure. Such investments generally have a long lead time and a long lifetime; replacement of the existing infrastructure and the construction of new infrastructure have to be decided long in advance. Are private owners sufficiently interested in that long term?

The last of the three developments of the regime change, the stronger focus on economic efficiency, has the largest impact upon the issue of infrastructure adequacy. This is also the development for which the technical constraints and characteristics of the network industries play an important role. This development has led to a new paradigm for network industries: network industries are no longer seen as integrated monopolies, but as sectors in which some form of competition is feasible. Competition should be introduced wherever possible (Van Twist and Ten Heuvelhof 1999a, 1999b). As a consequence, most network industries now involve some complex combination of market activities and monopoly activities. For example, in the electricity industry, the networks have remained a 'monopoly', but generation and supply of electricity have become competitive activities. For the competitive activities the 'invisible hand' of the free market is supposed to bring about economic efficiency, whereas the exclusive activities have become subject to forms of economic regulation that give incentives to improve economic efficiency. These forms of incentive regulation could, however, lead to a decrease of quality of the infrastructures if the actors involved cut their expenses on maintenance and investments too much.

The shift from an integrated network industry to an 'unbundled' combination of competitive and exclusive activities has an impact upon the achievement of infrastructure adequacy. As infrastructure adequacy aims to ensure the long-term ability of the system to meet reasonable demands for the *use* of the infrastructure, the unbundling of the network 'service' (such as passenger transport, or the supply of electric energy) from the infrastructure (the railways, or electricity grid, respectively) would create a co-ordination problem, as it separates the planning of the infrastructure from that of the service provision over the infrastructure. For example, it could happen that a new rail link is constructed, but that no service provider ends up using it for passenger (or freight) transport.

Another effect of the introduction of (some) competition in network industries is that it has led to the development of trade. In particular, where international trade has developed, issues of scope may become relevant, as well as issues of European law. For example, the liberalisation of the European electricity and gas markets has caused an increase in international trade and hence has led to a much larger demand for the use of cross-border interconnection capacity as well as a general increase in international flows. The planning of the electricity or gas transmission networks cannot effectively be done on a national scale alone any more. European law has become important where national measures affect international trade in the network industry concerned.

So, in the current network industry structure there may be several problems regarding the investments in infrastructures. How can the (potential) investor in infrastructures 'see' the social benefits, if he is pursuing his own private interest? How is the co-ordination between the planning of the network infrastructure and the network service going to be arranged? What should be done if the scope

of the network firm does not coincide with the relevant scope of planning of the infrastructure (such as with electricity transmission networks)?

### 6.1.3 THE RELEVANCE OF TECHNICAL CONSTRAINTS AND CHARACTERISTICS

The regime change mentioned above has necessitated a (re)design of the legal organisation of the network industries concerned. This restructuring includes a redesign of the organisation of (the function of) infrastructure adequacy. One of the aspects that play an important role are the technical constraints and characteristics of the network industry at issue. They bear upon the possibilities for organising competition in the industry concerned, whereas the economic organisation that is chosen affects, in turn, how the technical issues can be arranged. Therefore, for well-founded decisions on the (re)structuring of a network industry, the relevant technical, economic and legal aspects all need to be taken into account, as well as the public policy goals.

However, this essay focuses on the relation between the technical constraints and characteristics of the physical infrastructure, on the one hand, and the 'governance mode' for investments in the physical infrastructure, on the other hand. In this essay, we attempt to analyse which technical constraints and characteristics are relevant in relation to the regime for investment in infrastructures, as well as how they impact the achievement of an adequate level of investment in infrastructure. It should be noted that no two network industries are exactly the same. Even if one particular network industry is considered (such as for example the electricity industry), the actual impact of technical characteristics upon the governance mode for infrastructure adequacy may depend on the circumstances of the case at hand (such as economic and legal aspects as well as policy considerations). Therefore we think it is useful to gain some understanding about the most relevant aspects to consider for determining the effect of technical characteristics upon the achievement of a sufficient level of investment in infrastructure, and to develop some idea about how these aspects bear upon the issue of infrastructure adequacy.

This approach leads to the following structure of this essay. First, we discuss at which levels technical characteristics can play a role with respect to infrastructure adequacy (section 2). Next, a (generic) method is presented that may help the analysis of the function of infrastructure adequacy in network industries, and may support the design of the legal organisation of that function (section 3). In section 4, this method is applied to the function of 'transport adequacy' in the electricity industry. Based upon the results of this electricity example, combined with the general observations from section 2, we identify how the technical characteristics of network industries affect the governance of infrastructure adequacy (section 5). Finally, section 6 offers some conclusions.

## 6.2 TECHNICAL CHARACTERISTICS PLAY A ROLE AT TWO LEVELS

Although the conceptual visualisation of network industries as networks over which services can be provided is appealing, in practice there are significant differences between different network industries, inter alia with regard to the technical constraints and characteristics. These differences impact the (possible) legal and economic organisation of the network industries concerned. This also affects the issue of the organisation of the investments in infrastructure. The technical characteristics play a role at two different 'levels'. First, they influence the choice for an overall governance mode for the industry. This concerns questions such as: what type of competition can be introduced, or what level of unbundling is required? Second, the technical characteristics influence the specific organisation of the (governance) regime for investments in infrastructure *given* the overall governance mode.

### 6.2.1 EFFECT UPON THE OVERALL GOVERNANCE MODE

Technological differences impact the type of competition that can be introduced in the network industry concerned: competition *with* the infrastructure, competition *between* infrastructures, competition *for* the infrastructure, or competition *on* the infrastructure (Van Twist and Ten Heuvelhof 1999a, 1999b). For example, it is economically and technically feasible to have competing networks for mobile telephony. Therefore, competition between infrastructures would be feasible for mobile telephony. For electricity, however, for technical reasons, it is not reasonable to have more than one single (AC) electricity network. Therefore, the type of competition that could be introduced for this industry, would be competition *on* the infrastructure.<sup>2</sup> Moreover, the technical characteristics influence the decision of which activities in the network industry concerned can become competitive. For example, if it is concluded that for electricity competition *on* the infrastructure is feasible, it should still be decided which activities can be liberalised: generation, and/or supply, etc.?

Subsequently, the choice for a particular mode of competition has an influence on the character and the extent of the *unbundling* that is required for an effective introduction of the envisaged type of competition. An important aspect for adequate investment in infrastructure is the link between the infrastructure and the service that is provided in the network industry concerned. 'Infrastructure adequacy' means that the infrastructure is sufficient with a view toward the provision of the relevant *service* in the long term. For example, in the rail industry, it is relevant that in the long run the infrastructure remains sufficient to meet the demand for passenger service. It is not very useful if a lot of new infrastructure is being constructed over which later almost no train service is provided.

In the context of the link between infrastructure and service, the technical characteristics are highly relevant. Where competition between networks is feasible,

*unbundling* appears not to be necessary. In these cases, competition takes place between integrated chains. Examples are the competition between providers of mobile telephony, or the competition between cable companies and the fixed telephony company for data communication (such as Internet use). But where competition *on* the infrastructure has been introduced, some separation is needed between (operation and ownership of) the infrastructure, on the one hand, and the service(s) offered over the infrastructure, on the other hand. Such *unbundling* has, for example, been introduced in the electricity and gas industry, as well as for the railways.

This conceptual picture of a separation between the infrastructure and the services that can be delivered over it may have some appeal, but it is not yet sufficiently precise for a thorough understanding of the network industry at issue. For this, one must look more closely at the relation between the ‘service’ provided by the network industry and the infrastructure. For example, in the electricity industry the quality of ‘electricity supply’ (as experienced by the system users) is completely determined by the (exclusive) operator of the network. A system user receives the same quality of service as his neighbour, regardless which ‘supplier’ he has chosen. The so-called ‘supply of electricity’, for which competition has been introduced in the EU, is not something ‘physical’, but instead something administrative. In the rail industry, there is a slightly different situation when competing service providers are allowed access to the infrastructure. One competitor could, for example, use more comfortable trains, while another might specialise in more scheduled trains.

It is evident that for the issue of *investments* in infrastructure, the economic regime surrounding such investments is highly relevant. The technical characteristics of the network industry involved may play a role in the design of that economic regime. It is important how the income of the operator/owner of the infrastructure is determined. How does it relate to the use of the infrastructure? What are the resulting economic incentives for the operator/owner and for the users of the infrastructure?

For example, it is possible to determine which link in the rail network is used by a particular train, so that that train could be charged for the use of that particular link. In an electricity network, however, the power flows simultaneously over many links in the network; the marginal effect of a single transaction upon the use of the network depends on all of the other transactions at that same instant. This technical characteristic makes it very difficult, if not impossible to relate the tariffs for use of the electricity network to the use of particular links.<sup>3</sup> This impacts the organisation of infrastructure investment: for investment in a new rail link, future revenues that relate to the use of that particular link can be taken into account; this would be impossible for electricity.

Not all of the relevant differences in the income structure of network companies relate to technical characteristics. For example, a government may choose for

rate-of-return regulation for new investments in infrastructure or for a system where new investments must be paid for from an income that is capped (incentive regulation). In the former case, there are likely to be stronger incentives for the network firm to invest in new infrastructure. However, the choice that is sketched here, does not depend on technical characteristics.

Besides the incentives for the operator/owner of the infrastructure, the incentives for the system users are also relevant. Because they pay tariffs for use of the network, the structure of these tariffs affects the use they are going to make of the infrastructure. For example, if electricity producers do not have to pay a transport tariff, or if their transport tariff is the same for the entire country, that tariff will not provide any incentive to locate new power plants at particular places within the network. But for the 'adequacy' of the network, it does make a difference at which location (new) power plants are located.

### 6.2.2 RELEVANCE FOR THE ORGANISATION OF INFRASTRUCTURE ADEQUACY

The influence of the technical constraints and characteristics discussed above concerns the 'high-level' policy choices regarding the network industries concerned. But also regarding the design of the legal organisation of the 'infrastructure adequacy' function *within* the existing, more general, legal framework for that industry, technical issues are important.

For example, in the electricity industry, the capacity of the lines within the *transmission* network depends to a certain extent on how much *generation* capacity is available at the different nodes in the network. Therefore, in the electricity industry, the adequacy of the infrastructure also depends on the 'adequacy' of generation resources. In this example, the function of infrastructure adequacy overlaps with other functions (for a technical reason). Another example is that the direction of electric flows cannot be controlled directly. As a result, the flows in one part of the system may be influenced by what happens in another part of the system. For instance, if the many windmills in Northern Germany are producing electricity, they cause large energy flows transiting through the electricity network of the Netherlands to Belgium and France. This (technical) characteristic means that the relevant scope for the planning of infrastructure adequacy for electricity transmission networks is larger than a single transmission network.

In section 1.3, we already indicated that for the design of the legal organisation of network industries the relevant technical, economic, legal and policy aspects need to be taken into account. The actual effect of a particular technical characteristic of a certain network industry upon the governance mode for infrastructure adequacy is therefore likely to depend on the other aspects ('circumstances'). For that reason, it would be virtually impossible to provide a list where characteristic A always leads to effect AA, covering all of the network industries considered here. However, we think that it would be possible to present some method that

could support the analysis of concrete cases (a particular network industry in a particular context). The method is presented in section 3 and is called the ‘function-based legal design & analysis method’, abbreviated: FULDA method.

That method could be used to study the organisation of (the function of) infrastructure adequacy within some overall governance mode. To illustrate the impact of technical constraints and characteristics on the design of the regime for infrastructure adequacy (given the overall governance mode) the example of the electricity industry will be elaborated (see section 4). This example also serves as an illustration of how the FULDA method can be applied to a particular network industry.

As regards the organisation of infrastructure adequacy, the FULDA method suggests that relevant issues are the function’s scope, the information that is necessary, as well as the means for the function. Moreover, one should also look at the overlap between the function at hand (infrastructure adequacy) and other functions. Finally, the money aspect is important: who pays for infrastructure adequacy and who receives the benefits? The ideal situation would thus probably be that the relevant information and means are in the hands of the ‘responsible actor’, who has the right economic incentives, while his ‘scope’ coincides with the relevant infrastructure scope. In practice, however, this ideal case may in many cases not be present. In some of those cases, this is due to various technical constraints and characteristics.

## **6.3 DESIGNING THE LEGAL ORGANISATION OF INFRASTRUCTURE ADEQUACY**

### **6.3.1 DESIGN APPROACH**

For the (re)design of the legal organisation of a network industry the relevant technical, economic and legal aspects all need to be taken into account, as well as the public policy goals. Would it be possible to integrate all of these aspects in a systematic way? That may be possible if the problem considered here is approached as a ‘design problem’. This approach (based on Herder and Stikkelman 2004, Knops et al. 2005) will be elaborated below. In the image of the design approach, the main theme of this WRR project could then be formulated as ‘how should the institutional arrangements be designed in order to secure infrastructure adequacy in the relevant network industry?’

The starting point of the analysis is that the performance of the network industry depends on the simultaneous achievement of several (necessary) functions. For example, in the electricity industry the energy balance within the system must be maintained, voltages must be kept within predefined limits, overloading of lines must be prevented, and transmission reserves must be kept available so that whenever a contingency in the system happens, this does not lead to an interruption of electricity supply. For the long-term performance of the network industry

‘infrastructure adequacy’ becomes relevant. This can also be considered a function that must be achieved.

In our design approach, we look at the (re)design of the network industry from a public perspective. Therefore, we have chosen ‘government’ as the designer in our design problem. The object to be designed is the governance mode for investments in infrastructure. ‘Government’ is here defined as the actor (or combination of actors) that has (or have) sovereignty, i.e., the power to organise the network industry concerned through legislation and regulation. This sovereignty can be divided over several levels. For example, in the European context, this sovereignty is divided between the European Community level and the member states. Within states, sovereignty can (further) be subdivided over national, federal and regional levels (e.g., the *Länder* in Germany).

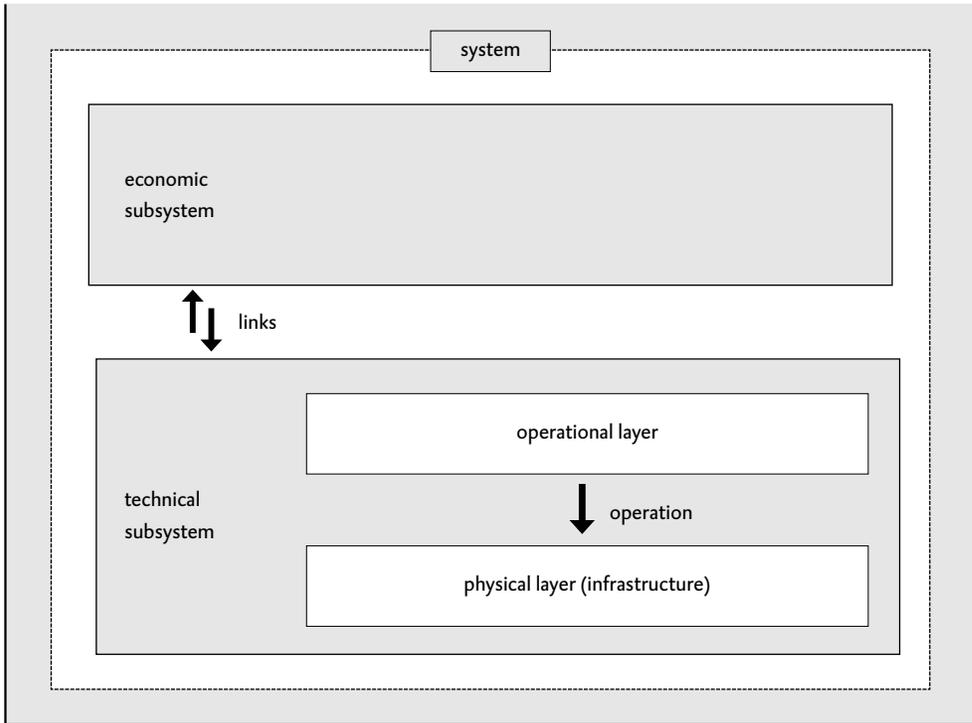
Our design approach is based upon four building blocks:

- the analysis of the system (the network industry);
- the goals for the design problem;
- the ‘design space’: what is ‘legal organisation’ actually?;
- legal constraints.

### **Analysis of the system**

As already indicated, we are searching for an integrated and systematic approach to the legal organisation of network industries. Therefore, we need to take both the technical and economic dimensions into account. In order to understand both the technical functioning of a network industry and its economic organisation, as well as their interplay, we apply a conceptual framework that can be seen as a generalisation of the framework which was earlier applied in Knops et al. (2001, 2004) and De Vries (2004) for the electricity industry. The underlying conceptual framework is basically as follows. The network industry is seen as a ‘system’, which consists of a technical and an economic subsystem (see figure 3.1). The technical subsystem consists of the physical infrastructure (physical layer) and the actors that technically operate the physical infrastructure (the operational layer). Besides the technical subsystem there is an economic subsystem, which covers all contractual relations and the actors among which these contracts are concluded, as well as the interests related to ownership of the infrastructure. This conceptual framework structures the analysis of the system. There is no ‘legal subsystem’ in figure 3.1 as it is outside this system because it is either the object to be designed (‘design space’) or a legal constraint (see below).

For a better understanding of the ‘structure’ of the *technical* subsystem for electricity, ‘functions’ and ‘tasks’ were chosen as the starting point of the analysis (Knops et al. 2005). Functions seem to be the natural building blocks from the technical perspective at least (cf. OTA 1989; Kirby et al. 1995; UCTE 2004; NERC 2006). These concepts play a central role in the proposed FULDA method (see section 3.2). A *function* is considered to be an ‘ensemble of related activities that contributes to the functioning of the system’.<sup>4</sup> The performance of a more general

**Figure 6.1** The conceptual framework underlying the system description

Source: The author

function can be subdivided into sub-functions, which in turn are smaller ensembles of related activities which contribute to the performance of the function at large. These (sub)functions can be further deconstructed into the performance of tasks. A *task* is considered to be 'a single activity that contributes to the performance of a function' (and thus to the functioning of the system).

As 'function' is a generic concept, it seems that it can be used for (the analysis of) other network industries as well. Examples of functions that must be achieved in the electricity industry are operational functions such as the maintenance of the energy balance, flow management, and voltage regulation, as well as long-term functions such as generation adequacy (i.e., securing the availability of sufficient generation capacity in the long term) and transport adequacy (see section 4). The main issue considered in this WRR project concerns the function of 'infrastructure adequacy'. The central question of this project could thus be formulated as 'how should the institutional arrangements be designed in order to secure infrastructure adequacy in the relevant network industry?'.

### Goals

Generally, if we want to design something new, there is a 'problem' for which the design should be a solution. In this case, we want the network industry to perform so that the social goals regarding the long-term development of the infra-

structure are achieved. We shall call the goals for the performance of the network industry: the *primary* goals. For the electricity sector, for example, these goals for the industry's performance would involve the 'triple A' goals that electricity supply is *available*, *affordable*, and (socially) *acceptable* (Knops et al. 2005).

We can also consider *secondary* goals, which relate to the legal organisation itself. These secondary goals may contribute indirectly to the performance of the network industry. For example, a specific legal organisation of the industry that is very stable, may reduce uncertainty, and therefore, may lead to a higher level of investment (and hence to a better performing industry) than an unstable legal organisation. The two main secondary goals that were identified in relation to the electricity industry are as follows (Knops et al. 2005): (i) that regulatory uncertainty for the industry should be minimised, and (ii) that the legal organisation should be consistent both internally and externally (i.e., consistent with the existing general legal framework, e.g., competition law).

It is evident that trade-offs have to be made between the various goals. For example, in the context of infrastructure adequacy, one goal is to provide an infrastructure with (more than) enough capacity, whereas another goal would be that the costs that society has to pay for it are minimised. Some trade-off between these two must be found. This is typically a task for the designer, so in our design problem a task for government.

Moreover, where more levels of government are involved, it is possible that they will have different goals or weigh the goals differently. For example, in industries where the European Community has introduced competition such as the electricity and the gas industry, the Community could have as one of its main goals the development of competition and the creation of an internal market (as such), whereas a member state may be more interested in the security of supply in its own country and the average prices in its 'national' market.

### ***Design space: What is 'legal organisation'?***

The design space is the set of all possible designs. In our design problem this involves all of the possible types of legal organisation of the network industry at issue. To describe this design space, we need to find a generic set of relevant issues (the design variables). This generic set is vital if we want to develop some cross-sectoral analyses for the organisation of the function of infrastructure adequacy in *different* network industries.

With such a set of generic questions we can define what we consider to be 'legal organisation', the 'object' that needs to be designed. An attempt for such a classification of the relevant issues of 'legal organisation' can be made when realising that, in the process of restructuring a network industry because of liberalisation, privatisation, or commercialisation, the legal organisation centres on the questions 'Who does what, and how?' and 'What control possibilities does government have?'. To elaborate, these two questions concern the following four issues:

- *responsibilities*: Who should be responsible for the performance of particular functions?
- *permissions*: Who should be allowed to perform which activities ('tasks')?
- *rules*: In accordance to what rules should these functions and tasks be performed?
- *control*: What possibilities does government have to control the performance of the electricity industry?

All of the possible combinations of 'answers' to these questions constitute the design space in our design problem.

The first issue is responsibility. It concerns the issue of whether a particular actor should explicitly be designated as the one publicly responsible for a particular function or whether that function should be left to 'the market'.

The second issue is about permissions. It relates to the question of which actors are allowed to perform a particular activity (and therefore a particular *task*). This issue is – of course – relevant in cases where no specifically responsible actor has been designated (i.e., when a particular activity is left to 'the market'). But it is also important when such a responsible actor exists, because the actor who is responsible for a particular function can decide to have tasks, necessary for that function, carried out by others (but still under his responsibility).

In addition, this issue of 'permissions' also concerns the aspect of 'negative allocation', i.e., who is *not* allowed to perform a specific task. This aspect plays an important role in, for example, the electricity industry, where the exclusive activity of network operations is generally unbundled from other, competitive activities concerning electricity.

Moreover, the *rules* for these activities are also important. These 'rules' comprise the third issue. On a general level, there will probably be some correlation between the previous questions and the rules issue. If a single actor has been designated as the (exclusively) responsible actor for a particular function, it is likely that this actor will be strictly regulated (as to the performance of this function), to prevent him from abusing his exclusive position. In the case that no specifically responsible actor has been designated, but the function has been left to 'the market', much less regulation can be expected.

In addition to the previous issues, government's possibilities of 'controlling' the performance of the system are the last main aspect of the legal organisation of a network industry. What means does a government have if the industry does not perform satisfactorily? The possibilities range from simply monitoring to a change of the rules or even direct government intervention.

### **Legal constraints**

The legal organisation of the industry is also influenced by the law itself. Rules of a higher order, or more general rules impose constraints on the potential types of legal organisation of the network industry at issue. These legal constraints can restrict the design space directly, because they eliminate some types of organising the industry as illegal. For example, if one of the legal constraints is that discrimination between domestic and foreign companies is prohibited, this constraint would disqualify any legal regime for the industry which – in its rules – explicitly discriminates between those two types of companies.

The actual definition of legal constraints depends on the scope of the design problem considered. If one considers the design of the legal organisation of the entire network industry, legal constraints can be formed by ‘general law’ such as constitutional law or competition law. If one is interested in the organisation of a single function within an already existing legal organisation of the other functions, (part of) the legal organisation of the network industry concerned could then be taken as legal constraints. For example, if one studies the ways to organise the ‘supplier of last resort’ in the context of the Dutch electricity industry (Knops 2004), the general Dutch rule that an electricity network operator is *not* allowed to be involved in the supply of electricity must – in principle – be taken as a constraint.

## **6.3.2 THE FULDA METHOD**

### **An outline of the method**

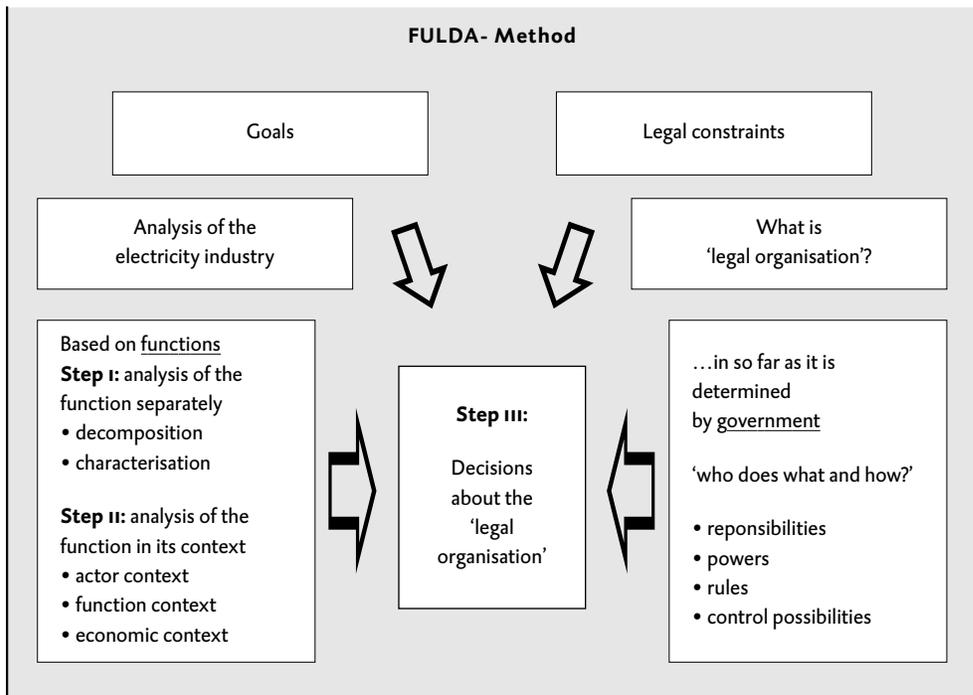
As figure 6.2 shows, all of the building blocks that were briefly discussed above, can be combined into a single method, which was initially developed for the electricity industry. The analysis that is applied in the method is based on *functions*. It tries to provide, first, a framework for a systematic evaluation (or *analysis*) of the legal organisation of a network industry. Second, incorporating the goals and (legal) constraints, it may produce guidelines for the actual *design* of the legal organisation of a network industry. Therefore, the method was coined the ‘function-based legal design & analysis’ method, abbreviated: FULDA method.

This section shows the outline of the method we propose.<sup>5</sup> Basically, the method in its most general form consists of a preliminary step of identifying the various functions in the network industry (in particular the technical subsystem) and three subsequent steps which should assist policy makers and lawmakers in determining a sound legal organisation for a particular function or group of functions. This approach allows us to cover all functions simultaneously and thus to design the complete legal organisation of the technical functioning of a network industry, but it also allows us to consider the organisation of a single function such as ‘infrastructure adequacy’. After the preliminary step involving the decomposition of the functioning of the

entire system into the simultaneous well-functioning of a list of separate functions, one can apply the next three steps of the method to a *single* function. These steps are:

- I. *Analysis of the function (separately)*: This consists of, first, a definition of the function, then a decomposition of the function into its sub-functions and tasks, and a characterisation of the function (section 6.2.2).
- II. *Analysis of each function within its context*: This involves the following questions (section 6.2.3). First, what actors are relevant for this function, including its sub-functions and tasks, and how ('actor context')? Second, how does the function concerned relate to other functions ('function context')? Finally, how does the function relate to the economic actors and functions ('economic context')?
- III. *Decisions of how to organise the function concerned*: In this step, the most important decisions with regard to the legal organisation of the function are considered in a systematic fashion (section 6.2.4).

**Figure 6.2** Structure of the FULDA method



Source: Knops 2008

Basically, in step I and step II one tries to gather the information that is relevant for the decision-making stage (step III). Therefore, the type of information needed for step III to some extent determines the questions posed in steps I and II. The *analysis* of the functions in step I and step II builds upon the system description, which is one of the building blocks of our design framework. Step III concerns the decisions that have to be made regarding the legal organisation of

the network industry concerned. The structure of these decisions is based upon our analysis of ‘legal organisation’. Incorporating the goals and (legal) constraints, we will try to offer guidelines for the *design* of the legal organisation of the function(s) considered. The main structure of the FULDA method is illustrated in figure 3.2.

### **Step I: Analysis of the function separately**

Steps I through III concern a single function. Step I consists of defining the function and describing it. This description involves two main issues: (i) the *decomposition* of the function in its constituent sub-functions and tasks, and (ii) the *characterisation* of the function. The relevant questions for the decomposition and the characterisation are summarised in table 3.1.

The decomposition of a function also entails an analysis of the possible ways of carrying out that function. This includes considering whether alternative ways exist to provide the function concerned (compared to the way in which the function is currently provided). For each way to provide the function one should determine what *means* are needed to accomplish the tasks and what *information* is required. In step II it will, subsequently, be considered what actors dispose of those means and that information.

### **Step II: Analysis of the function within its context**

In the process of understanding the complex structure of a network industry it is a valuable first step to analyse the functions separately. However, for a genuine understanding of the *structure* of such a network industry it is necessary to study also the ‘context’ of each function. With regard to the context of a function, two questions appear most relevant: how is the function (including its sub-functions and tasks) embedded in the environment of actors (‘actor context’) and how does the function relate to other functions (‘function context’)? This includes the

**Table 6.1** Relevant questions in step I of the FULDA-method

1. Decomposition	<ul style="list-style-type: none"> <li>a) what subfunctions and tasks (including alternatives)?</li> <li>b) what are the means necessary for the function?</li> <li>c) what is the information necessary for the function?</li> </ul>
2. Characterisation	<ul style="list-style-type: none"> <li>a) is the function (or its subfunctions or tasks) necessary?</li> <li>b) is (central) provision or coordination required?</li> <li>c) is a technical standard necessary?</li> <li>d) what are the function’s cost structure and cost level?</li> <li>e) what is the function’s scope?</li> <li>f) does the function concern the short or the long term?</li> </ul>

analysis of the relations with economic actors and functions ('economic context'). The relevant questions for the different contexts are summarised in table 3.2.

### **Actor context**

The analysis of the actor context of a function concerns the question of 'what actors are relevant for this function, and how?'. This analysis is supposed to provide the information that is necessary for the decisions to be made in the next step of the method. In our view, the most relevant questions are:

- *Who benefits from this function?*
- *Who disposes of the relevant information?*
- *Who has the means to carry out the function?*

With respect to the first question, we mention two special cases. There could be a situation in which *all* system users benefit or one where the function can be individualised to a single customer. The second and third questions are possibly difficult to answer at first sight for the function at large, in which case, it may be easier to first determine which actor disposes of the relevant information or means for the *tasks* involved. It is important to be forced to consider these information and means-related questions, as the analysis of this issue may very well reveal that the 'right' information or means are not (yet) readily available or that the relevant information or means are in the hands of the wrong actor.

### **Function context**

The analysis of the function context concerns the question 'how does the function relate to other functions?'. In the first step of this method the functions have been studied in isolation. In practice, however, different functions may be related to each other. A first issue of concern is to *group* the identified functions. Functions could for example be categorised based on the scope of the function, or on its short-term or long-term nature.

A next point of concern is whether there is some *overlap* between functions. This overlap can exist at different levels. The most obvious level concerns the question whether two or more functions share the same sub-function(s) or task(s). Another level at which functions can overlap pertains to the means necessary for a function (or its sub-functions and tasks). Can the same means be used in the course of different functions? In addition, there can also be overlap with respect to information. Moreover, a short-term function and its related long-term function can be connected.

### **Economic context**

In the analysis of the context of a technical function an important issue is how the function concerned is embedded in the economic subsystem, i.e., how the (technical) function concerned is related to the various economic functions. The analysis of the *economic* actor and function contexts could be performed jointly, which we could refer to as the 'economic context'. It concerns the following issues: First, to what economic functions is the technical function concerned

related? Second, given these links, what economic actors are connected to the function concerned?

**Table 6.2 Relevant questions in step II of the FULDA method**

1. Actor context	<ul style="list-style-type: none"> <li>a) who benefits from the function?</li> <li>b) who has the relevant information?</li> <li>c) who has the necessary means?</li> </ul>
2. Function context	<ul style="list-style-type: none"> <li>a) to what class of functions does the function belong?</li> <li>b) is there some overlap with other functions?</li> </ul>
3. Economic context	<ul style="list-style-type: none"> <li>a) to what economic functions is the function related?</li> <li>b) ... and (thus) to what (economic) actors?</li> </ul>

Source: Knops *et al.* 2005

**Step III: Decisions of how to organise the function concerned**

Step III is the core of the method proposed. For each function considered, one has to address the issues of relevance for the design of the legal organisation in a systematic way. The main structure of step III follows the generic set of issues identified in section 3.1:

- A. Should someone be made explicitly responsible for this function?
- B. Who should be made responsible? or: Who should be allowed to perform this function?
- C. How should the function be further organised?
- D. Which are the control possibilities that government should implement?

**A. Should someone be made explicitly responsible for this function?**

A government may decide to explicitly impose the (public) responsibility for a particular function on a particular actor, who can then be held accountable for the performance of that function. Under what circumstances should a government assign such responsibility?

First, the function must be important enough to justify governmental involvement. Essentially, this concerns the issue of whether the function at issue can be considered *necessary* from a public perspective. Is there a ‘public interest’ associated with the function? Second, if the function is deemed necessary, one should consider additional questions to determine whether there is a need to *explicitly* appoint someone responsible. Such a need is present if central provision or co-ordination of the service is required, either from a technical perspective (‘technical monopoly’) or when central provision is the most economically efficient method (‘natural monopoly’). Furthermore, the explicit imposition of a responsibility may also be necessary in order to secure the provision of public services, in

particular *universal service*, if the desired level of service provision will probably not be provided by the ‘market’. Functions that are necessary from a public perspective, but for which there is no need to explicitly assign responsibility, can be left to the ‘market’. An example of this kind is electricity generation. For functions that are not considered necessary in the public interest, there is no need to designate a *publicly* responsible actor. However, there may, nevertheless, be a case for the introduction of (some) *regulation*, an issue which is discussed below in question C.

**B. Who should be made responsible? or: Who should be allowed to perform this function?**

The second issue concerns the ‘who question’. In the event that public responsibility needs to be imposed, this B-question becomes ‘who should be made responsible?’. Otherwise, the question concerns the issue of ‘who should be allowed to perform the function concerned?’.

We first discuss the case in which one (or more) responsible actor(s) must be assigned. The issue of which candidate to choose depends on ‘positive’ and ‘negative’ aspects. Positive aspects provide arguments in favour of particular actors, while negative aspects argue against the choice of particular actors. In the context of the electricity industry, the following three aspects provide ‘positive’ indicators (Knops et al. 2005):

- what is the scope of the function (e.g., the system, a local network, or a single location)?
- who has the means to carry out the function?
- who has the information necessary to carry out the function?

The negative aspects could, for example, relate to ‘unbundling’ requirements, e.g., a prohibition for an electricity supplier to be involved in (electricity) network operation.<sup>6</sup>

Based on the information gathered, one can ultimately narrow down the number of ‘candidates’. It is possible that the relevant aspects more or less point to the same actor(s). For example, if a necessary function in the electricity industry concerns the entire ‘system’, the *system operator* appears to be the prime candidate to be made responsible. But it is also conceivable that the picture is much more mixed: in these situations the relevant aspects may point to a number of ‘equally qualified’ candidates.

In a situation where no responsible actor needs to be designated, the starting point is that – without any further rules – anyone is allowed to perform the function concerned. In our view, ‘positive’ as well as ‘negative’ requirements for the *actors* could, in these cases, be introduced.

### **C. How should the function be further organised?**

Starting at the function level, this question deals with the organisation of the function's sub-functions and tasks. Basically, it entails two issues, namely (I) *who* determines the further organisation of the function, and (II) *how* is it further organised. Since we have chosen, in this research, the perspective of the public authorities ('government') and we consider the legal organisation in so far as it emanates from government, our interest with these issues is mainly to what extent there is a need for government to determine the organisation of the function and to pre-specify rules for it (and its sub-functions and tasks).

In our view, there are two extremes. On one side of the spectrum is the 'default case' without any further *ex ante* government regulation, in which the provider of the function concerned has complete discretion to determine how the sub-functions and tasks are further organised. On the other side of the spectrum, government can (itself) lay down the complete, detailed legal organisation of the function concerned. In this case, there is very little or no discretion for any of the actors regarding the organisation of the function. In practice, the organisation of a function probably lies somewhere between these two extremes.

Essentially, we look for indicators that can justify regulatory governmental involvement with the sub-functions concerned, and for some rules of thumb as to what type of legislation and regulation is needed in those cases. For that, we apply the type of analysis which we used for the function level also 'recursively' at the sub-function level, i.e., the sub-function is analysed with the FULDA method as if it were a function itself. In doing so, it seems natural to at least look at indicators similar to those used in the analysis at the function level. In section 6.4.3, we illustrate this process for the example of the function of transport adequacy in the electricity industry. One of the issues considered there is whether an explicit responsibility should be imposed for one of the sub-functions.

It is obvious that after considering whether there is a need to designate someone as the actor responsible for a sub-function, the next question is 'who?'. Again, this entails either 'who should be made responsible?' or 'who shall be allowed to perform the sub-function concerned?'. The assessment of these issues depends on the same aspects as were listed at the function level. However, again, the sub-function level is a little bit different. In some instances, a government may decide to leave it up to the discretion of the actor performing the function to determine who shall be allowed to perform the sub-functions. In this regard, it appears to us that negative requirements must (always) be explicitly imposed by government. For positive requirements, there is more room, depending on the circumstances, to let the actor in charge of the function at large determine these requirements.

Another issue is whether any further (government) *rules* ('regulations') are needed for the (sub)function concerned. A first observation is that when there is an exclusive operator for the function concerned, further regulation is more

likely. Prevention of possible abuse of that exclusive position may require *ex ante* regulation (as opposed to only *ex post* instruments of intervention). Moreover, regulation may be necessary for various reasons. For a general list of such reasons, see, e.g., Baldwin and Cave 1999.

When deciding how to (further) organise a particular function, government should also consider the ways it can control the performance of the function. This is the next (and last) issue considered here with respect to the legal organisation of a function. The implementation of a flexible mechanism to control the actors that are involved in a particular function, may be an alternative to an elaborate *ex ante* organisation of this function.

**D. Which are the control possibilities that government should implement?**

A government should not only be interested in devising the initial legal organisation of the function concerned, but it should also be interested in ways that it can control the performance of that function, in particular if that performance may prove insufficient. This last question concerning the legal organisation deals with this issue.

The government's control options can generally be classified in four classes. The first class concerns the government's exercise of its own explicit *ex ante* control powers, for example when a regulator approves tariffs. The second class aims at aligning the behaviour of actors with the conduct as intended by the current legal framework (this is the issue of 'enforcement'). The third class of control possibilities are those measures by which the existing legal framework can be changed. The fourth class consists of the government's options of taking over the performance of certain activities within the electricity system from private actors – typically in emergency situations.

The choice of control possibilities is connected to the other decisions for the legal organisation of the electricity industry. For example, some of the positive requirements for actors can be laid down in licenses. Subsequently, these license conditions can then be enforced by government. Moreover, the obligation to have a license for the providers of a particular function may be an alternative 'tool' for regulation compared to the making of general rules (in terms of legislation or regulations) for that activity. For example, in England and Wales, the obligatory licenses for suppliers of electricity provided a starting point for the implementation of a 'supplier of last resort'. In the Netherlands, however, such *general* supply licenses did not exist, which made the implementation of a supplier of last resort less straightforward and more complicated (Knops 2004).

It is difficult to give concrete prescriptions for the establishment of control possibilities based *only* on the information retrieved in steps I and II of the FULDA method. This is because the decisions made on issues A through C impact the range of options for government control mechanisms that is available. Moreover, the choice for particular governmental control possibilities is also related to the

national legal style. Nevertheless, some observations can be made. First, the more crucial a function is, the more interest government has in arranging an effective control framework. Second, if the consequences of non-optimal performance of a function are large and difficult to ‘repair’, the control framework should be more focused on prevention. For example, if a network operator fails to invest sufficiently in the quality of its network for a couple of years, a simple substitution of the network operator would not solve the problem of a lack of (past) investment. A control framework aimed at the prevention of this situation may be preferred. Third, the technical characteristics of the network industry concerned should certainly be taken into account, as they may necessitate tighter control than in a seemingly comparable non-network case (for electricity: Newbery 2002; Boisseleau and Hakvoort 2003). Fourth, ownership can play a role. If the companies to be controlled are *owned* by government (i.e., the state or regional/local authorities), some of the control can possibly occur through that (ownership) channel. In such a case, the control framework can be less elaborate than those involving *private* companies.

## 6.4 EXAMPLE: TRANSPORT ADEQUACY IN THE ELECTRICITY INDUSTRY

### 6.4.1 REGIME CHANGE HAS NECESSITATED A NEW ORGANISATION OF TRANSPORT ADEQUACY

Transport adequacy is the main long-term network-related function in the electricity industry. The function is highly relevant because of the long lifetime of networks and their assets in combination with the long lead times for significant changes to occur in the network. Although the networks have remained ‘monopolies’ after liberalisation, the situation regarding transport adequacy has changed.

The unbundling of generation and network operations has posed an interesting challenge as the central planning of generation and the network no longer appears feasible in the current industry structure. This type of central planning was quite common prior to liberalisation.

Another development is the stronger focus on economic efficiency, which has also affected exclusive operators such as network operators. They have become more and more subject to incentive regulation over the last few years, which aims at improving economic efficiency. This could, however, lead to a degradation of quality if companies cut maintenance and investments too much.

Therefore, relevant questions remain of how to find a balance between efficiency and the quality of the infrastructure, and how government can control this. In this section, the function will be analysed via the FULDA method. The conceptual framework underlying our analysis of the electricity system is depicted in figure 4.1.

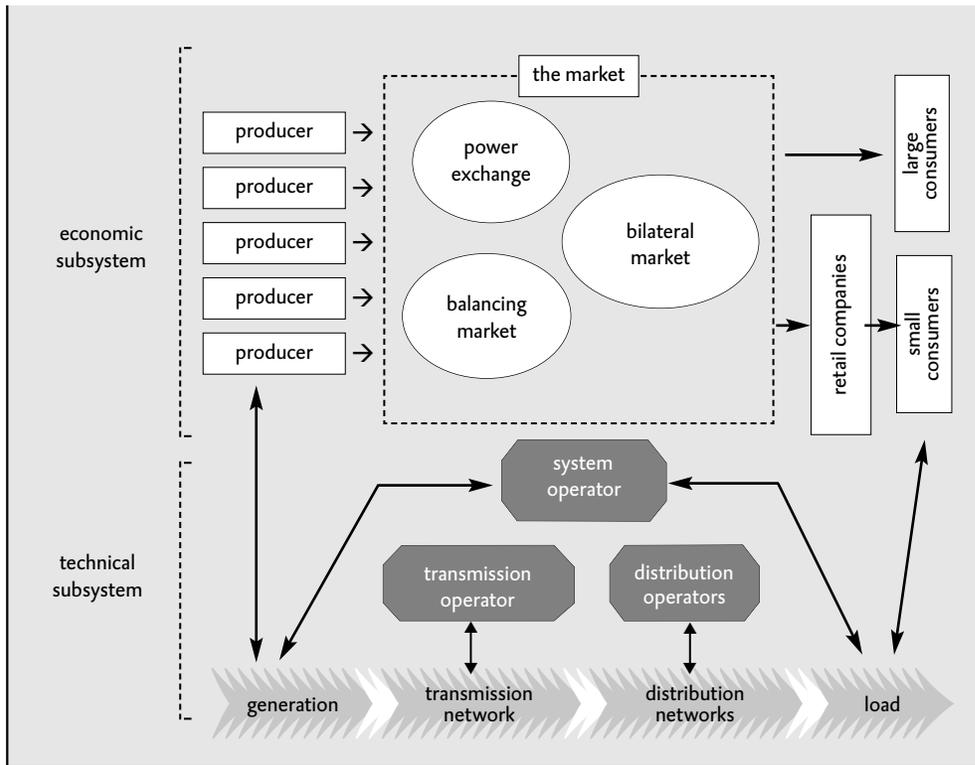
### 6.4.2 STEP I: ANALYSIS OF THE FUNCTION OF TRANSPORT ADEQUACY

The function of transport adequacy can be defined as ‘to ensure the long-term ability of the system to meet reasonable demands for the transport of electricity under normal operating conditions.’ Such normal operating conditions include regular and reasonably expected unscheduled outages of system elements.

A decomposition can be made of the function into the following sub-functions:

- the forecasting of the future demand for transport;
- the planning of the development of the network that is needed;
- the actual decision making regarding investments.

**Figure 6.3** The conceptual framework underlying the system description for electricity



Source: Knops et al. 2004

The information necessary for this function concerns the long-term development of the network itself (what are the characteristics of the network components and what is going to happen to them?) as well as the expected use of the network. Moreover, regarding decisions of how the network’s ‘adequacy’ is maintained and when investments should be made, information about the costs of components and construction as well as about construction times and the lifetimes of the various components is needed.

The means for securing transport adequacy involve, of course, the different types of network components and supporting equipment such as transmission lines, transformers, capacitors, etc. But, generating installations can also help mitigate transmission constraints and thus enhance the transport capacity of a network. In general, there may be a whole range of possibilities for mitigating constraints in the network. Moreover, it should be noted that the addition of new transport lines does not always automatically lead to an increase in the network's transport capacity. There are cases in which it may even lead to a decrease of available capacity.

The transport adequacy function can be characterised as follows. The function is necessary in order to secure the reliability of the system in the future. Moreover, at least per network there should be central co-ordination of the long-term development of the network concerned. However, there are differences between the transport adequacy function for a distribution network, for a transmission network or for the investment in interconnectors between networks.

In most distribution networks, the power is drawn from (higher-voltage) transmission networks (to which the large power stations are connected) and then distributed to the customers (loads). The flows in and the capacity of the distribution network can be predicted fairly well and do not seem to depend too much on the capacity of other networks. Therefore, regarding 'distribution adequacy', the scope appears to be a single distribution network.

The situation is different for transmission networks. The direction of flows can vary significantly depending on which generating installations (at which locations) produce power. Moreover, the transfer capability 'within' a certain transmission network (of a single network operator) is affected by the situation in neighbouring networks. For example, the situation in the (North-) German electricity grid has an impact on the transport capacity in the Dutch network. Consequently, the relevant scope for the effective planning of the adequacy of a transmission network is larger than the network itself. Therefore, if there is no overarching planning co-ordinator, at least some co-operation of neighbouring transmission operators (such as the exchange of information and 'capacity plans') appears useful.

For the development of interconnection capacity the situation is even more complicated. Here, two different network operators are involved and, generally, two different legal frameworks as well. So, for transmission and interconnectors, the scope of the function of 'transport adequacy' appears to be larger than the network itself because of the impact neighbouring networks have.

The costs associated with the function are mainly the capital costs of the network components that are needed, as well as the costs for maintenance if such maintenance were to postpone the replacement of the network component concerned. The costs for individual network components may be well-known, but it is much more difficult to estimate the relation between the effect on the quality of the

system's performance, on the one hand, and the costs of the investments in the network, on the other hand. Finally, it is obvious that transport adequacy is a long-term function.

### 6.4.3 STEP II: THE CONTEXT OF TRANSPORT ADEQUACY

Regarding the actor context, it is obvious that all network users benefit from the network's adequacy. Another aspect of the actor context concerns the 'relevant information'. Here, the situation is more complex. Information related to the network components (their characteristics, costs, etc.) is typically known to the network operator(s). The development of demand ('load') is not under their control, but can probably be predicted reasonably well based on the experience and forecasts of the demographic and economic developments. The development of electricity generation and the locations on which new generating capacity will be constructed, however, lies in an unbundled environment outside of the sphere of the network firm because it depends on the decisions of the generating companies. Moreover, even for a given distribution of generating installations, the network operator has no advance knowledge about which generating installations the market will dispatch. One day the system has to accommodate power flows from A to B, but on another day, they may have to accommodate flows from B to A or from A to C. This means greater planning uncertainties.

For the means, the picture is similar to that of the relevant information. Network components may be in the hands of the network companies (network operators or owners). Generation assets which may contribute to transport adequacy, however, are operated and owned by generating companies. Unbundling prevents network operators from operating generating installations.

The function context is as follows: The function can be categorised as a long-term function with the network as its scope. How does it relate to other functions? Transport adequacy is related to generation adequacy. First, both involve a forecasting of the development of supply and demand. Moreover, it is useful for the planning of networks to know *where* there will be *how much* generating capacity located in the network. In some cases, this generating capacity at a particular location in the network can even help improve the capacity of the network. On the other hand, when it comes to generation adequacy, it is necessary to know whether the transport capacity in the network is sufficient to transport the power of all the available generating installations to the customers. If there is enough generating capacity to meet peak demand, but not all customers can be served due to congestion, the system as a whole is not adequate.

Transport adequacy is also linked to operational security. Transport adequacy aims to ensure that a network, under normal operating conditions, does not experience any interruptions. The operational security function indicates what should be considered 'normal conditions': what scheduled and reasonably expected unscheduled outages must be taken into account? What is the reliabil-

ity level that should be aimed for? Besides, it may be obvious that the choices made in the long-term planning of the network also have an impact on the (future) network operation functions. For instance, one could decide to build a large redundancy into the network, such that congestion will not occur. In this case, network operators would very seldom have to solve congestion in the network. Instead of creating this redundancy another option would be to invest in the 'infrastructure' that enables corrective *operational* measures to deal with congestion. These types of choices determine the range of options network operators will have when operating their networks in the future.

The economic context is highly relevant for transport adequacy. In the end, the function concerns decisions regarding replacement, upgrades or the expansion of the network and its elements. These decisions have an economic component as well because they cost money, after all. Thus, the owners of the network(s) are crucial actors in the area of transport adequacy, as they are probably the ones who will have to bear the costs of these investments. For them, it is important to see how these investments can be recouped, which depends on the regulatory scheme that is in place for the income of a network operator and/or owner. System users are likely to be the ones to increase the income of the transmission operators and/or owners, through the network tariffs they pay to the network operators. If the network owner has to bear the costs of network investments, something should be arranged between the network operator and the owner in order to provide the owner with the necessary funds for network replacement, upgrades or expansion.

For the issue of the investment in interconnectors, the electricity market (for the commodity) is a relevant factor as well. In these cases where price differences may exist between markets (for electric energy), the transport of electricity between those markets has an economic value, corresponding to the price difference between the markets concerned. As it is illegal in the EU to apply a general cross-border transport fee for electricity, the price differences can only remain if there is no physical connection between the concerned markets, or if there is congestion regarding the interconnection between the relevant areas. In these circumstances, it may be an option to consider an investment in interconnection capacity which can be recovered via the exploitation of the trade potential across that link (rather than through regulated cost-based transport tariffs). This is called 'merchant' transmission investment (see, e.g., Knops and De Jong 2005).

#### **6.4.4 STEP III: DECISIONS HOW TO ORGANISE THE FUNCTION OF TRANSPORT ADEQUACY**

##### ***Should someone be made explicitly responsible for this function?***

As there is a public interest involved in 'transport adequacy' and because it is a 'technical monopoly', the FULDA method suggests that some actor be made explicitly responsible for the function of transport adequacy for each network.

However, the pertinent question remains of whether such an explicit responsibility for the long-term development of the network is necessary in addition to one's responsibility for the short-term operation of the network. There are three reasons for preferring the imposition of an *explicit* responsibility.

First, the responsibility for operational security entails the provision of a secure network service insofar as the existing network capacity reasonably allows. For example, if there is a (physical) shortage of transport capacity, a network operator is allowed to refuse access to the grid.<sup>7</sup> An explicit responsibility for transport adequacy would entrust the network operator with a clearer long-term mission.

Second, besides the operators of the network, the owners are also involved. They may have the economic interests related to the investments for transport adequacy. Therefore, if a government decides to impose an explicit responsibility for the function at hand, it is forced to think about who exactly should be made responsible (e.g., the network operator) as well as to think about the relation between the responsible actor and other relevant actors (e.g., the network owner).

A third reason for the imposition of an explicit responsibility is that it would be a good reference point and starting point for a governmental control framework. If the responsibility were only implicit in the (explicit) responsibility for operations of the network, the legal basis of the building up of a compliance and enforcement framework would have been rather weak.

### ***Who should be made responsible?***

Which actor in the electricity industry should be entrusted with the responsibility for transport adequacy? The network operator, the network owner, or a specific planning agency? The FULDA method identifies three 'positive aspects' for determining which actor is to be designated.

The first aspect is the function's scope. The scope for 'distribution adequacy' is a single distribution network, so that the network operator and/or owner seem reasonable candidates to be entrusted with the responsibility for transport adequacy for those networks. For the adequacy of transmission networks and interconnection capacity, the scope of the function is larger than a single transmission network (if that network is coupled). So, if the responsibility for transport adequacy for transmission and interconnection is imposed upon the transmission operators (or owners), some co-operation or co-ordination between neighbouring transmission operators is needed. If the co-operation between network planners is not effective in practice, one might consider the institution of an overall planner for transport, who covers several networks. That would, however, require a whole framework for the enforcement of the implementation of the planning.

Furthermore, the information aspect must also be considered. Most of the relevant information is available to the network operators. However, they probably lack the information about the future development of generation, as this is left to the market. Information about the planning of neighbouring networks could be exchanged between network planners. This could improve the network planning and enhance transport adequacy substantially.

The third aspect concerns the means for transport adequacy, which are network assets and generating installations (which can support the functioning of the network). The latter may not be in the hands of network operators because of the unbundling requirements required by European (and Dutch) electricity legislation.<sup>8</sup> The network assets are operated by the network operator, but are owned by the network owner. The network owner and the network operator are two different roles, and they are, in practice, not necessarily (performed by) the same (legal) entity.<sup>9</sup> It is quite common that the network operator is part of a (vertically integrated) group of energy companies (the former incumbent utility), where the parent company still owns the network assets while the network operator only operates the network.<sup>10</sup> If the network operator is designated as the transport planner it must be ensured that the sub-functions forecasting and planning can be effected in the decision stage. Transport adequacy cannot be secured if the network planner's plans are not implemented. Therefore, the relation between network operators and owners must be carefully designed.

A final issue regarding the who-question for transport adequacy is the lack of control over generation. Currently, there is neither central control of generation planning nor are network operators allowed to be involved in generation. Unless some special 'long-term planning authority' is instituted and has the powers to control generation planning,<sup>11</sup> the only option for transport planners is to compensate for that lack of control. This has two effects. First, transport planners must reckon with more uncertainty regarding the direction of future flows, as they have no way of knowing which generating installations will be actually producing electricity. Second, with respect to the (potential) use of generating installations to support network operations, this would mean that transport planners should preferably rely on alternatives that do not require support from generating installations. An example is voltage control. A cheap source of reactive power, necessary for voltage control, are generating installations. But since the liberalisation of the electricity market, most generating companies do not want to guarantee the availability of that source of reactive power for 100 percent of the time, forcing network operators to invest in capacitors. This is an alternative source of reactive power, which is a more expensive source than the generating installations, but one that can be controlled by the network operators themselves who need it for those times when they cannot use generating installations for reactive power management.

### ***Further organisation of the function and governmental control possibilities***

How should the function be further organised, and which control possibilities should government implement? Considering the further organisation of the transport adequacy function, the following issues are most relevant. First, should some explicit responsibility be imposed for one or more of the sub-functions (in addition to the responsibility for the function at large)? Second, can the function be left entirely to the discretion of the responsible actor, or is there a need for rules concerning the function? Moreover, as the function concerns the development of the network in the long term, that term would allow some government control framework to become meaningful. This is the third issue.

Whether explicit responsibility should be imposed for sub-functions, depends on who has been entrusted with the transport adequacy function at large. If the transport *operator* has been made responsible for transport adequacy, that actor could be considered capable of performing the sub-functions of forecasting and planning himself. If the transport operator is not also the network owner, the sub-function of making the decisions may become problematic. In that case, something has to be arranged. One possibility is to give the operator/planner the right to decide about network assets, and to oblige the network owner to implement these decisions.

If the *owner* of the network has been made responsible for transport adequacy, it may be necessary to impose the responsibility for forecasting and planning upon another actor. This depends on the ability of the network owner to perform the forecasting and planning sub-functions himself. If the network owner does not have the expertise or does not have the required information, it may be useful to entrust another actor with the sub-functions of forecasting and planning. This actor should then make his 'results' available to the network owner. It is imaginable in this setting that the actor who does the planning also provides the network owner with a range of options to keep the network adequate. The network owner can then decide which option he prefers. For example, does he prefer to build a new transmission line right now, or invest in a transformer now and upgrade a transmission line later.

The distinction between the sub-functions of 'planning' and 'decision-making' can also be useful with regard to the issue of international co-ordination between transmission system operators/owners. It is evident that the transmission operators/owners are in a position to *decide* about investments that have to take place within their own network. But that does not preclude the possibility of instituting some form of 'joint planning' for the transmission network in a certain region. That sub-function of planning could be carried out jointly even if investment decisions are still being made by individual transmission operators/owners.

Concerning the second issue of whether any rules are necessary for the function at hand, it can be observed that a number of rationales for regulation apply in this case. First, transport adequacy concerns *planning*. Second, the electricity network is a monopoly. Third, the quality of the network is in most cases external to the network firm. In addition, transport adequacy is an overall function for which the costs must be apportioned. As there are a number of rationales for regulation, it is worthwhile to consider this issue in more detail. This discussion could be combined with a treatment of the question of which control possibilities government should implement. The reason that these two issues can be integrated is that transport adequacy is a long-term function so that the time scale of the function itself is more or less in the same range as the typical time scale on which government can exercise control.

One important control possibility for government is that it can determine the 'income structure' of the network operators. Hence, government can influence the economic picture with regard to infrastructure investment. Would it be possible for a government to design an income structure for network companies that leads to an efficient achievement of transport adequacy? This is what has been attempted with the instrument of 'quality regulation' of electricity distribution firms. The idea behind quality regulation through incentive schemes is that distribution companies receive the (public) 'value' of additional quality, so that they can assess whether an increase in quality is cost effective. Although this idea sounds fine in theory, in practice, there are still some difficulties associated with such incentive schemes for quality. Lack of information is a major constraint (Ajodhia 2006). Moreover, the lengthy lag between 'quality investments' for electricity networks and their effects, appears to be a fundamental problem for any control system for quality in electricity networks, which is based on some feedback mechanism (Knops et al. 2006).<sup>12</sup>

In the context of quality regulation (of the distribution networks) the aspect of 'quality of supply' is measured in terms of the frequency and the length of interruptions in the network service. However, transmission networks very seldom experience interruptions, so that the type of quality regulation applied to distribution firms does not seem suited for transmission networks. Government should rely on other instruments to control the development of transmission networks.

The income of the (exclusive) transmission system operator is regulated.<sup>13</sup> This provides government with a powerful tool to control the economic picture surrounding investment in transmission infrastructure. For example, the government's approval may be required before a large investment can be included in the rate base for the transmission tariffs. An interesting 'design choice' is whether the relevant regulatory authority is allowed (or even obliged) to develop and consider alternatives to the submitted plan, or whether it can only approve or oppose the plan as it has been submitted.<sup>14</sup> Moreover, government is likely to have powers regarding the spatial planning issues involved, such as the issue of which sites can

be used. On the other hand, large projects such as the expansion of a high-voltage grid may be difficult to realise as procedures may be numerous and cumbersome. In these situations, the support of the relevant public authorities for the project can help expedite the process. Another governmental control possibility is to require transmission network operators to publish their long-term plans for the network on a regular basis. These plans would show that the 'planned' network will indeed be adequate. Moreover, the plans would also help the 'market', for example, in deciding on where to build new generating installations or large electricity-consuming industrial plants. As mentioned above, interconnected transmission operators should co-ordinate their network plans. It is, however, difficult to see how national governments could *enforce* an effective international co-operation of transmission operators.

## 6.5 THE IMPACT OF TECHNICAL CONSTRAINTS AND CHARACTERISTICS

What can we learn from the example of (the design of the legal organisation of) transport adequacy in the electricity industry regarding the impact of technical constraints and characteristics upon the governance of infrastructure adequacy in network industries? This will be discussed here. One of the effects of the technical characteristics of network industries is the need for certain forms of co-ordination. This topic will be discussed separately in section 6.5.3.

### 6.5.1 THE EFFECTS ON UNBUNDLING AND THE ECONOMIC REGIME

If we consider the example of transport adequacy in the electricity industry, which was elaborated in section 6.4, and in light of the general observations made in section 6.2, what can we say regarding the impact of technical constraints of network industries upon the governance of infrastructure adequacy? First of all, it appears that the decomposition of the function of transport adequacy for electricity could also be applied to infrastructure adequacy in network industries in general. Infrastructure adequacy thus concerns forecasting, planning and decision-making. In the 'ideal situation', the relevant information and means would be in the hands of the 'responsible actor', who has the right economic incentives, while his 'scope' coincides with the relevant infrastructure scope. This ideal scenario is certainly not present in the electricity industry at this time.

This relates first to the governance mode that is currently in place for the electricity industry. In the electricity sector, it is technically only meaningful that there is one single (AC) electricity network. Therefore, the only feasible type of competition that can be introduced is what we called in section 6.2.1: competition *on* the infrastructure. This type of competition has been introduced in the electricity industry. As a consequence, electricity generation and (contractual) supply have become competitive activities, whereas the networks have remained monopolies. System users should have a right to access the electricity network. The unbundling of generation and supply, on the one hand, and transport of elec-

tricity, on the other, affects the forecasting and planning of the development of the network. Network operators/owners lack reliable information regarding the development of generation capacity (which is relevant for network planning). Moreover, in the current industry structure, the network is in principle supposed to accommodate all transport that would result from the contracts concluded in the free generation and supply market. It is almost impossible to predict this market outcome (i.e., which power plants will produce, at which locations), so that the network probably needs to have a greater available reserve capacity (than in the past) to carry out the requested transport. To summarise, we see that if unbundling is needed because of the technical characteristics, there will be a loss of co-ordination between the planning of the service and of the infrastructure.

If unbundling is unnecessary – mostly because there is neither a technical monopoly nor a natural monopoly – competition can occur between integrated chains. In this case, infrastructure investment is likely to remain integrated with the long-term planning of the service provision. Sufficient investment in infrastructure is probably necessary for the companies involved to retain their competitive position in the long term. For example, where a fixed telephony company sees business opportunities in data transport (for example for Internet use) over its network, it may want to increase the capacity of its lines to end customers by replacing copper cables with fibre optic cables. Whether or not the investments that are made in this kind of competitive environment are ultimately sufficient from a public perspective, depends *inter alia* on the risks these companies face.

Another relevant aspect is the influence of technical characteristics on the economic regime for the use of the infrastructure: what is the income structure of the network firms, and how is the price of tariff for customers structured?. The electricity industry is an extreme case. The technical characteristics of electricity make it difficult, if not impossible to charge network users the (marginal) cost they impose upon the network. Consequently, regulation focuses on the total income of a network operator so that individual tariffs only represent an average cost. This tariffication scheme makes it impossible to link new investments in infrastructure to the use that system users will make of it.

However, in the case of natural gas, transport is something more tangible compared to electricity because the gas molecules pass through one pipe at a time. In this context, it is not only cost-based tariffs that seem possible, but also value-based prices for transport. If there is a difference between the gas price at either end of a gas pipeline, transport of gas through that pipeline has an economic value equal to the price difference. This creates the possibility for the recovery of investments through the exploitation of a trade potential across a link (market-driven infrastructure investment).<sup>15</sup>

More generally speaking, we can conclude that the better that fees for use of the infrastructure can be ‘individualised’ to the use of a particular link, the easier it

becomes to assess whether adding such a link is worthwhile. From a public perspective, it is important that a *social* cost-benefit analysis is made. Moreover, as discussed in section 6.2, the effects of the tariff structure on the behaviour of system users are also relevant. What effect does their behaviour have on (the planning of) infrastructure adequacy?

### 6.5.2 IMPACT ON THE GOVERNANCE OF INFRASTRUCTURE ADEQUACY

Besides the impact of technical characteristics upon the overall governance mode of the industry, these characteristics also play a role in the context of the specific organisation of the function of infrastructure adequacy within the overall governance mode. The example in section 6.4 of transport adequacy in the electricity industry, illustrates this. Technical issues may affect the relevant aspects of information, means, scope, and incentives.

One complication regarding ‘information’ has already been identified above: unbundling in the industry complicates forecasting and planning. Another complication is that the relevant ‘information scope’ can be larger than the scope of the responsible operator. For example, in the case of electricity we have seen that the (effective) capacity of one transmission network depends on what happens in neighbouring networks. Thus, generally speaking, where there are numerous interdependencies in the system, the net effects of individual measures (investments) in the network are difficult to determine. This is also an informational problem. It complicates a cost/benefit analysis of investments in the network.

The electricity example also shows a problem with respect to the means. Generating installations are important for network operation and, hence, for network planning. They are needed for the management of the flows and for reactive power management and voltage regulation. In other words, the transport capacity of electricity networks is also influenced by the distribution of generating installations. In some instances, the construction of a generating installation at a particular location in the network serves as a simple way of increasing the *network’s* capacity (compared to an upgrade of the line capacity). However, in the current industry structure, in which electricity generation and operation of the network must be *unbundled*, a network operator cannot plan the development of generating capacity. That development is left to market. So, in these cases, network operators cannot ‘enforce’ some ‘generation solution’ to a network problem. Consequently, network firms have, for example, in recent years invested in capacitor banks (which may be under their own control) as an alternative to using generating installations for the function of voltage regulation and reactive power management.

The role of ‘scope’ has already been mentioned briefly above. In the electricity example we saw that the relevant planning area for transport adequacy for transmission networks and interconnection capacity is larger than the area of a single

network or operator. This also occurs in other industries: for a rail link intended for international freight transport, such as the *Betuwelijn*, it is vital that the connecting capacity across the border is sufficient. More generally, these examples show that in some cases ‘spatial co-ordination’ is needed.

With respect to the incentives for investment in infrastructure the time lag between investment decisions and their effects is problematic. In network industries this time lag can be very long. There is a risk that this time frame is longer than the typical period at which the companies’ management and owners focus. Moreover, this period is so long that the threat and effectiveness of any *ex post* (government) control is likely to be too weak. The time lag also affects attempts to introduce a feedback loop of economic incentives for the ‘quality’ of the network service (and thus for the adequacy of the network infrastructure). To overcome this problem it may be necessary to introduce some forms of *ex ante* control or ‘regulation of the process’ (Ajodhia et al. 2003).

### 6.5.3 CO-ORDINATION

We have seen two instances where technical characteristics of the network industry caused the need for the arrangement of some form of co-ordination. Co-ordination could be necessary either between (unbundled) activities, or with respect to the scope. We generally see four options of how this co-ordination could be achieved. Two unbundled functions could be carried out by

- the same actor;
- different actors, but with a co-ordinating body;
- different actors, but with co-ordinating rules;
- different actors, without any explicit co-ordination.

Basically the same four levels apply in the case of co-ordination regarding the (spatial) scope

In the electricity industry, we can find examples of each of these levels of co-ordination. First, the ‘transmission system operator’ is the merger of the ‘transmission operator’ and the ‘system operator’. That merger was considered necessary because of the strong overlap between several of their activities. In this case two functions are performed by the same actor. Another example of this level, but for the type of co-ordination regarding the scope, would be the creation of regional transmission system operators that cover several countries. Second, the situation of ‘different actors, with a co-ordinating body’ occurs in the Reliability Functional Model of the North American Electric Reliability Council (NERC 2006). In that model, there is a ‘planning co-ordinator’ who has to co-ordinate the transmission planning (done by the transmission planner) and the resource planning (of the development of generation capacity, which is done by the ‘resource planner’). The organisation of the maintenance of the energy balance within the context of the UCTE (the organisation related to the simultaneously interconnected electricity system on the European continent) is an example of the third

level of co-ordination. Each system operator maintains the ‘balance’ within his control block, while the co-ordination among them is achieved through a set of rules (laid down in the *UCTE Operation Handbook*). An example of the fourth type (no explicit co-ordination mechanism) is the lack of co-ordination between transport adequacy and generation adequacy in the Netherlands. It is the combination of these two functions that determines the reliability of the system in the long term, but since there is no real planning of the development of generation, it is impossible to implement any form of explicit co-ordination between the two functions.

The choice of the most suitable level of co-ordination may depend on the circumstances, such as the existing institutional framework. Therefore, it is difficult to present precise decision rules *a priori* for the design choice of which of the levels of co-ordination should be implemented in a particular case. However, a practical way to approach the problem is to start with the assessment of the situation of ‘no co-ordination’ (the last level): could the functions concerned be performed satisfactorily in this situation? If not, one could move to the next level and repeat the assessment at that level, until one reaches the level for which one expects that the co-ordination is sufficient to ensure the achievement of the function(s) concerned. In some cases a workable solution would be to have a stronger form of co-ordination for one of the sub-functions. In the example of the transport adequacy function for electricity transmission networks, we suggested that the *planning* sub-function could be carried out jointly by the different connected network operators (for example, through a co-ordinating body), whereas the eventual *decision making responsibility* concerning the investments in a single transmission network could remain with each individual network operator.

Considering the topic of ‘spatial’ co-ordination, a relevant question remains: which ‘government level’ is the appropriate level for the implementation of governmental control? For example, if certain investments in the network of one country are considered very useful for the network in a wider region, but have few (positive) effects for the country in which the investments should take place, the national governments of the neighbouring countries are probably most motivated to bring about the investment but they most likely lack the power to enforce that investment. A possible solution could be that a body with a wider scope, such as the European Community, exercises control in these cases. But the question remains of how in the case of such European control the link between the investment and the regulation of the network operator’s/owner’s income, which is still a national issue, would be arranged.

The same four levels basically also exist for co-ordination with respect to the issue of government control. How this is arranged in practice, depends on the institutional framework and an assessment of the relevant circumstances. For example, one may consider instituting a European regulator for a certain network industry. If its powers are based on European legislation, the creation of this kind of regulator may take some time. An alternative would be the close co-operation

of national regulators. If those national regulators are already well established and have sufficient (national) powers in the relevant areas, this solution could perhaps be implemented faster and be equally as effective. However, the 'co-operation solution' is vulnerable if the co-operation among the regulators turns out to be ineffective.

## 6.6 CONCLUSION

The governance mode that applies to investments in infrastructure in network industries depends on many factors. Technical constraints and characteristics play a role, as do legal constraints, economic issues and policy considerations. All of these aspects influence the overall 'governance mode' for the network industry concerned, but they also affect the way the specific function of 'infrastructure adequacy' is (or should be) organised within the context of that overall mode. Infrastructure adequacy can be defined as (the function) to ensure the long-term ability of the system to meet reasonable demands for the use of the infrastructure under normal operating conditions.

It was argued that a 'design approach' may provide a systematic way of dealing with the design of the institutional arrangements for the network industries, including the organisation of the function of infrastructure adequacy, which is the main problem addressed in this WRR project. A design method was proposed as part of that design approach, which can *inter alia* be used to structure and support the analysis of how technical constraints and characteristics bear upon the governance of infrastructure adequacy in a concrete case (of a particular network industry in a particular context). This 'function-based legal design & analysis (FULDA) method' was originally developed for the electricity industry, but its formulation is generic so that the method may be useful for other network industries as well.

The function of infrastructure adequacy can be broken down into the sub-functions of (I) the forecasting of demand, (II) the planning of the infrastructure, and (III) the actual decision making concerning the investments in infrastructure. The (FULDA) method was used to analyse the function of infrastructure adequacy (or 'transport adequacy') for electricity. We have tried to determine the impact of the technical characteristics of network industries upon the governance mode for infrastructure adequacy from this example and our general considerations described in section 6.2.

First, the technical characteristics influence the overall governance mode of the network industry concerned. The most important issues involve the question of whether there is a need for unbundling the industry, and the effect of technical aspects on the economic regime for infrastructure investments. Unbundling causes a lack of co-ordination between the planning of the infrastructure and the planning of service provision. This affects infrastructure adequacy since the infrastructure must be sufficient with a view to the provision of the relevant

*service* in the long term. The economic regime for the network operators/owners determines their incentives for investments in infrastructure.

Second, technical characteristics also play a role in the organisation of the function of infrastructure adequacy *within* the context of the overall governance mode for the industry. That was illustrated by the example of transport adequacy in the electricity industry. The FULDA method suggests that relevant issues involve the function's scope, the necessary information, and the function's means. Moreover, one should also look at the overlap between the function at hand (infrastructure adequacy) and other functions. Finally, the money aspect is also important: who pays for infrastructure adequacy and who receives the benefits? The ideal situation would probably be that the relevant information and means are in the hands of the 'responsible actor', who has the right economic incentives, while his 'scope' coincides with the relevant infrastructure scope.

In reality, however, the situation is less than ideal in network industries. This was illustrated by the electricity industry example. There we saw the following technical characteristics posing challenges to the (legal) organisation of the function of transport adequacy. The information aspect is problematic because of (I) interdependencies in the network (that make it difficult to predict the effect of individual investments on the performance of the entire system), (II) unbundling (which means that it becomes difficult to reliably forecast the development of generation capacity, which is now determined by 'the market'), and (III) the relevant scope (for an effective planning of transmission networks, information about the developments in neighbouring networks is also relevant). The most salient issue with respect to the 'means' is that generating installations are an important means for the operation of an electricity *network*; but in the current industry structure, in which electricity generation and network operation must be unbundled, a network operator cannot plan the development of generating capacity. With the scope aspect we saw that the transport capacity within a transmission network and on interconnectors depends on the situation in neighbouring networks. Therefore, some co-operation or co-ordination must be arranged between network operators/owners in a region in order to let the aggregated effect of their individual investment decisions be effective. The final aspect involves the incentives. The time lag between network investment decisions and their effects is so long that the threat of *ex post* control or the signal of a feedback mechanism are so weak, that a government should consider implementing some form of *ex ante* regulation of the investment process.

One of the effects of the technical characteristics of a network industry is that it may cause the need for some co-ordination. Co-ordination may be necessary either between different activities (functions), mainly as a result of unbundling, or regarding the (spatial) scope for the same activity (function), for example because the capacity of the infrastructure depends on neighbouring networks. We identified four options to arrange the co-ordination. The activities that must be co-ordinated can be carried out by:

- the same actor;
- different actors, but with a co-ordinating body;
- different actors, but with co-ordinating rules;
- different actors, without any explicit co-ordination.

The level of co-ordination that is most suitable may depend on the circumstances, such as the existing institutional framework. A practical way to approach this problem is to start with considering the situation of 'no co-ordination' (the last level) and to assess how that situation would be: does one expect that the functions concerned can be performed satisfactorily in such a situation? If not, one could move to the next level and repeat the assessment until one reaches a level of co-ordination for which the satisfactory achievement of the functions concerned appears to be ensured.

Where there is a specific need for some co-ordination regarding the spatial scope, the question arises of whether there should also be some co-ordination with respect to the issue of government control. Basically the same four levels exist for this type of co-ordination as well. How this should be arranged in practice, depends on the institutional framework and an assessment of the relevant circumstances.

## NOTES

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- 2 For new electricity networks in an area that has yet to be developed, it might be feasible to introduce a tender, which would be an example of competition *for* the infrastructure. This situation would only occur in exceptional cases.
- 3 It might be possible to work with different electricity prices at different nodes in the network, where these differences in price reflect the congestion in the network. In such a system, users who use a congested link in the network would have to pay more; these payments form ‘congestion rents’ which are earned by the network operators. The congestion rents that network operators collect in this electricity pricing system are, however, *not* related to the costs of the network (which is clear if one thinks of a network with a large capacity – but which is also very expensive at the same time: in this case, there will be not much revenue, on the one hand, as there is not much congestion, but network costs are high, on the other hand). Therefore, in addition to the congestion rents there still has to be a network tariff scheme to provide network operators with an income that is sufficient for carrying out their duties.
- 4 Cf. NERC 2006 who define a function as ‘a set of tasks so closely related to one another that separating those tasks, by assigning them to different organisations, would threaten to impair the integrity of the function.’
- 5 For a more elaborate discussion of the method, see Knops 2008.
- 6 E.g., Articles 10 and 15 of the European Electricity Directive 2003/54/EC.
- 7 Article 20(2) Directive 2003/54/EC.
- 8 Article 10(1) and 15(1) Directive 2003/54/EC.
- 9 Recital (10) of Directive 2003/54/EC acknowledges that the transport operator may own the network infrastructure, whereas Recital (8) and Articles 10(2)(c) and 15(2)(c) address the situation in which the transport operator does not own the network assets.
- 10 The current Directive (2003/54/EC) does ‘not create an obligation to separate the ownership of assets of the transmission system from the vertically integrated undertaking’ (Articles 10(1) and 15(1)).
- 11 Although it is unclear how that could be effectively done in the current industry structure.
- 12 For an elaborate treatment of quality regulation in the electricity industry, see Ajodhia 2006.
- 13 Articles 20(1) and 23(2) Directive 2003/54/EC.
- 14 New Zealand is an example of the former, the Netherlands an example of the latter.
- 15 For new direct current (DC) electricity interconnections this type of market-driven infrastructure investment is also feasible (‘merchant interconnectors’), see, e.g., Knops and De Jong 2005.

## REFERENCES

- Ajodhia, V.S., B. Franken, and C. Van der Lippe (2003), 'Dutch price and quality regulation system', in: J. Myslivec, I. Benes, A.D. Owen and A. Plourde (eds.), Proceedings of the 26<sup>th</sup> Annual IAEE International Conference 'New challenges for energy decision makers', International Association for Energy Economics, 4-7 June, Prague, Czech Republic.
- Ajodhia, V.S. (2006), *Regulating beyond price. Integrated price-quality regulation for electricity distribution networks*, (Ph.D. thesis Delft University of Technology) Delft.
- Baldwin, R. and M.E. Cave (1999) *Understanding Regulation: Theory, Strategy and Practice*, Oxford: Oxford University Press.
- Boisseleau, F.H.A.R. and R.A. Hakvoort (2003) 'The liberalisation of the European electricity market(s): an unstructured restructuring process?', in: J. Myslivec, I. Benes, A.D. Owen and A. Plourde (eds.), Proceedings of the 26<sup>th</sup> Annual IAEE international Conference.
- Herder, P.M. and R.M. Stikkelman (2004) 'Methanol-based industrial cluster design: a study of design options and the design process', *Industry & Engineering Chemistry Research* 43: 3879-3885.
- Kirby, B., E. Hirst, and J. Vancoevering (1995) 'Unbundling electric generation and transmission services', *Energy* 20: 1191-1203.
- Knops, H.P.A., L.J. de Vries and R.A. Hakvoort (2001) 'Congestion management in the European electricity system: an evaluation of the alternatives', *Journal of Network Industries* 2: 311-351.
- Knops, H.P.A. (2004) 'Securing Dutch electricity supply: towards a supplier of last resort?', in M.M. Roggenkamp and U. Hammer (eds.) *European Energy Law Report I*, Antwerp: Intersentia, pp. 235-274.
- Knops, H.P.A., L.J. de Vries and A.F. Correljé (2004) *Energiekeuze(s) belicht: Beleidskeuzes voor de inrichting van de elektriciteits- en de gasector in Nederland*, The Hague: Wetenschappelijk Instituut voor het CDA.
- Knops, H.P.A. and H.M. de Jong (2005), 'Merchant interconnectors in the European electricity system', *Journal of Network Industries*, vol. 6 no. 4, pp. 261-293.
- Knops, H.P.A., L.J. de Vries and R.A. Hakvoort (2005) 'A systematic approach to the legal organisation of the electricity industry', in: Proceedings of the 28<sup>th</sup> Annual IAEE International Conference 'Globalization of energy: markets, technology and sustainability', International Association for Energy Economics, 2-6 June, Taipei, Taiwan.
- Knops, H.P.A., V.S. Ajodhia, and Y.C. Wijnia (2006), 'Quality regulation of electricity distribution companies: is everything under control?', in: M. Roggenkamp and U. Hammer (eds.), *European Energy Law Report III*, Antwerp: Intersentia, pp. 73-109.
- Knops, H.P.A. and E.D. Cross (2006) 'How to design a (liberalised) electricity industry in light of the relevant technical, economic and legal aspects?', in: Proceedings of the 26<sup>th</sup> USAEE/IAEE North American Conference 'Energy in a world of changing costs and technologies', 24-27 September, Ann Arbor, MI, US.

- Knops, H.P.A. (2008) *A Functional Legal Design for Reliable Electricity Supply. How technology affects law*, (Ph.D. thesis Delft University of Technology), Antwerp: Intersentia.
- NERC (North American Electric Reliability Council) (2006) *Reliability Functional Model, Version 3: Draft*, 21 April, online at: [www.nerc.com](http://www.nerc.com).
- Newbery, D.M. (2002) 'Problems of liberalising the energy utilities', *European Economic Review* 46: 919-927.
- OTA (Office of Technology Assessment) (1989) *Electric Power Wheeling and Dealing: Technological Considerations for Increasing Competition*, OTA-E-409, Washington, DC: US Government Printing Office.
- Twist, M.J.W. van, and E.F. ten Heuvelhof (1999a), 'Competition engineering in network-based industries. Paradigms, practices and pendulums', in: M.P.C. Weijnen and E.F. ten Heuvelhof (eds.), *The infrastructure playing field in 2030*, Delft: DUP, pp. 41-62.
- Twist, M.J.W. van, and E.F. ten Heuvelhof (1999b), 'Concurrentiebevordering in infrastructuur gebonden sectoren. Over ideologische en intellectuele bewegingen', in: W. Derksen et al. (eds.), *Over publieke en private verantwoordelijkheden*, The Hague: Sdu, pp. 217-254.
- UCTE (2004) *Operation Handbook* (version June 2004), online at: [www.ucte.org/ohb](http://www.ucte.org/ohb).
- Vries, L.J. de (2004) *Securing the public interest in electricity generation markets: the myths of the invisible hand and the copper plate*, (Ph.D. thesis Delft University of Technology), Delft.

## 7 EUROPE AND INVESTMENT IN INFRASTRUCTURE WITH EMPHASIS ON ELECTRONIC COMMUNICATIONS

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### INTRODUCTION

This essay looks more closely at the influence of European law and policy on infrastructure investment decisions, in light of telecommunications (or electronic communications as they are now called) in particular. It is structured as follows. The first part surveys how EC law generally affects regulatory decisions concerning investment in infrastructure and highlights two more specific issues arising out of the liberalisation experience, namely the mission paradox following from the separation of regulatory and operational functions and the creation of regulatory externalities (1). Then, in order to situate the sector better, the next section explains why electronic communications provides an interesting case study, but also why the conclusions drawn here might not so readily be applicable elsewhere (2). Afterwards, a section covers the main issues arising from the current discussion<sup>2</sup> on the framework for investment in infrastructure: the appropriateness of structural solutions, the design of behavioural regulation (if no structural solution is adopted) – including regulatory holidays – and the need for co-ordination at the EC level (3). Some conclusions are then drawn (4).

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### 7.1 THE INFLUENCE OF EC LAW STATE INTERVENTION CONCERNING INVESTMENTS IN INFRASTRUCTURE

#### 7.1.1 THE ROLE OF PRIMARY LAW

As a starting point, matters of investment in infrastructure are in the hands of the member states.<sup>3</sup> Of course, over the last 20 years, the EC has pursued a liberalisation policy in most network industries, accompanied by the creation of significant bodies of European legislation to harmonise the regulation of these industries. This has given a European dimension to infrastructure policy.

Nevertheless, before venturing too deeply into the specificities of secondary EC regulation, it is useful to outline how primary EC law – the EC Treaty and the case law that interprets it – can have an impact on the actions of member states when steering investment in infrastructure.

Since it is generally agreed that network industries are economic sectors, they fall under the ambit of the EC Treaty provisions on internal markets and competition law. This implies that state measures concerning these industries must respect the four freedoms underlying the internal market, in particular the freedom to provide services and the freedom of establishment. Furthermore, state measures cannot distort market competition.

For the purposes of this discussion, let us generally classify state intervention according to whether its impact on the economy (i.e., the amount of ‘displacement’ it causes) is heavier or lighter and whether it takes a financial/economic or legal form, resulting in the following matrix:

	<i>Heavier intervention</i>	<i>Lighter intervention</i>
<i>Financial/economic</i>	State ownership of production means	Subsidies
<i>Legal</i>	Monopoly rights	Regulations

Heavier intervention thus encompasses both the use of state-owned firms<sup>4</sup> and the conferment of monopoly rights on firms, whether state-owned or privately owned. In cases of heavier state intervention, Article 86(1) EC applies to confirm that state measures in relation to state-owned firms and holders of monopoly rights cannot breach the Treaty.<sup>5</sup> In practice, the two types of intervention often go hand in hand, i.e. the holder of a monopoly right will also be a state-owned firm. The application of Article 86(1) has thus far focused on monopoly rights more than on state ownership.<sup>6</sup> Since the beginning of the 1990s, Article 86(1) EC became more incisive as the ECJ developed its ‘automatic abuse’ line of case-law.<sup>7</sup> Whereas beforehand, the creation of a legal monopoly as such did not breach the Treaty, the ECJ has now acknowledged that, under certain circumstances, a legal monopoly can be set up so that it either encompasses other activities which could be provided under competition<sup>8</sup> or is unable to meet demand for its services.<sup>9</sup> In such cases, the member state actually organises the monopoly in a way that the legal monopolist is automatically encouraged to abuse its dominant position and thus breach Article 82 EC.<sup>10</sup> Conferring a monopoly organised in this fashion is thus in and of itself a breach of Article 86(1) read in conjunction with Article 82 EC. The monopoly would then have to be lifted. The only escape is Article 86(2) EC: the monopoly will be allowed to remain if it is necessary to enable its holder to discharge its obligations concerning services of general economic interest under economically acceptable conditions.<sup>11</sup> EC law therefore imposes relatively tight constraints on legal monopolies, which must be limited to what is strictly necessary to fulfil the public policy objectives for which they were created and which must not be set up in such a way that the holders of the monopoly will automatically be led to abuse their dominant position. This does not seem unfair, however, given that heavier forms of state intervention in the economy such as the creation of monopoly rights are the most likely to endanger the fulfilment of the policy objectives of the EC.

In contrast, EC law is more lenient regarding lighter forms of state intervention, i.e., the granting of subsidies and the use of economic regulation. The former can run afoul of the prohibition on state aid under Article 87 EC. However, exceptions are provided for in Article 87(2) and (3) EC. In particular, Article 87(3) EC allows

state aid for the development of disadvantaged areas<sup>12</sup>, which can cover subsidies for infrastructure projects, as seen further below.<sup>13</sup> Furthermore, in recent years, state aid law has evolved in such a way as to create a general path for public authorities to inject public funds in support of regulatory objectives. In *Altmark*<sup>14</sup>, the ECJ gave public authorities a relatively unconstrained discretion to set out ‘public service obligations’,<sup>15</sup> but in return has imposed a relatively strict set of disciplines on the use of public funds to compensate firms which are burdened with such obligations, so as to ensure transparency and objectivity.<sup>16</sup>

When it comes to economic regulation, the evolution of EC law in regulated sectors points to EC law becoming a form of discipline on member states. The concept of ‘impact on trade between member states’ which is meant to circumscribe the ambit of the four freedoms has consistently received a wide interpretation, so much so that the four freedoms will end up applying to almost all state measures.<sup>17</sup> The focus then shifts away from issues of applicability of EC law towards the substantive conditions for the application of the provisions of the EC Treaty. The application of EC law is then no longer a matter of preventing member states from taking certain measures from a limited set (measures which discriminate against goods, services, persons or capital from other member states), save for limited exceptions. Rather, it is a matter of ensuring that a much broader set of national measures (the so-called ‘indistinctively applicable’ measures), most of which pursue legitimate aims, do not adversely affect the internal market.<sup>18</sup> Since EC law applies to ‘indistinctively applicable’ measures, the justification for and aim of such measures, as well as their proportionality, become key to their assessment under EC law.

Similarly, under the less developed line of case-law applying Article 3(g) and 10 EC read in conjunction with Article 81 or 82 EC, member states are prevented from using national measures as a cover for cartels or abuses of a dominant position, which would be prohibited if they were entered into by private operators.

The above shows that EC law comes to assume a ‘control’ function over national law, providing citizens and firms with the ability to question the real motivation of state action as well as the choices made as to policy, instruments, enforcement, etc. Over time, as case-law evolves, member state action becomes in practice subject to ‘good governance’ requirements imposed via EC law,<sup>19</sup> including for instance openness, transparency, and non-discrimination amongst operators and customers.<sup>20</sup> EC law becomes a force to promote better administration and to fight shadowy operations and favouritism. It provides a vehicle for a healthy – but not fatal – dose of skepticism towards member state action.

Taking both heavier and lighter forms of intervention together, the thrust of EC law is then to bring member states, as much as possible, towards lighter forms of intervention, which are less heavily constrained through EC law because they are more easily compatible with the general economic policy objectives of the EC.

### 7.1.2 POSITIVE HARMONISATION AND SECONDARY LAW

While primary EC law remains relevant to network industries, in practice Community institutions have already come to the conclusion that the mere application of primary law would not enable the internal market and undistorted competition objectives to be achieved. Since the mid-1980s, the EC has been pursuing, in step with the Single Market programme, an active policy in network industries, with the Commission taking the lead against often reluctant member states. The core of the EC policy has been to liberalise the various industries – starting with electronic communications and extending to air transport, rail transport, postal service and energy.

Other essays in this collection are chronicling the ‘regime change’ that took place in the wake of these policies. Liberalisation processes were co-ordinated at the EC level, in particular, with a view to harmonising the resulting regulation so as to foster the internal market and undistorted competition. It would be wrong, however, to credit the EC with all the benefits and burden it with all the shortcomings of liberalisation. The EC institutions provided a convenient forum – and EC law a convenient instrument – to effect policy changes that had broad legitimacy (albeit not unchallenged) at national level. Liberalisation built upon prior changes which were primarily initiated by member states, such as the transformation of the agencies providing network services into corporations based on a private law model (corporatisation) and the partial or total opening up of such corporations to private capital (privatisation).

It is beyond the scope of this essay to look at the past and revisit these changes. They have resulted in the birth of partially or totally market-driven network industries, where firms pursue their private interests. The glorious years of liberalisation policy could well be behind us, however. In most network industries, EC liberalisation policy finds itself at a crossroad. Originally, competition was introduced primarily out of concern for efficiency. Of course, on the surface, a number of accounts would rather present liberalisation as the introduction of competition for the sake of it, as a value in and of itself. This is shortsighted. Rather, the economic and technical models which justified the maintenance of monopoly rights were exhausted and overhauled, and dissatisfaction was widespread among customers and also amongst the more visionary policymakers. To put it crudely, liberalisation was about ‘trimming the fat’ from the incumbents through the introduction of competition, thus forcing the incumbents to become more nimble and more responsive. The incumbents could become more efficient on all fronts, i.e., as regards both static – allocative and productive – and dynamic measures of efficiency. Nonetheless, the dynamic horizon was relatively short-term: increased dynamic efficiency was to come from more innovation using the same asset base.

Now, ten or more years down the road, the fat has been trimmed (at least to some extent) and the asset base has aged. The time has come for a new wave of investment in infrastructure, but that investment will take place in a liberalised

environment. This essay concentrates on the consequences of liberalisation for public authorities as they now shift their policy focus from increasing efficiency towards steering investment in infrastructure. In particular, public authorities sometimes overlook the consequences of one key element of the liberalisation processes, present from the outset in the liberalisation process, namely the separation of regulatory and operational functions.<sup>21</sup> Separation has two important consequences for our discussion here: the loss of control over operational decisions of firms (which leads to a ‘mission paradox’) and the risk that the cost of regulation for private firms are not fully taken into account in regulatory decisions (thereby creating a sort of ‘regulatory externality’). As in the rest of this essay, the discussion is illustrated with examples from the electronic communications sector.

### ***The mission paradox***

Separation of regulatory and operational functions, of course, implies institutional separation, in that a regulatory authority is created, separate from and independent of any firm, including the incumbent. Once they are established as separate institutions, the incumbent and the regulatory authority must also concentrate on their respective functions. It took many long years for the incumbents to accept that they were no longer going to be dictating regulatory choices. Conversely, regulatory authorities must also learn to focus on regulation and to let go of operational matters. This is also part and parcel of the choice for liberalisation of the market. In other words, the evolution of electronic communications should be primarily a matter for the market to decide, according to what customers demand and what firms can supply. Regulation only comes in when the functioning of the market is inadequate, in line with proportionality and other principles of good governance. Accordingly, for lawmakers and regulators to seek to base regulation on all-encompassing models of how a given sector should run is incompatible with the fundamental principles of regulation in the liberalised era.

Unfortunately, policymaking still tends to not fully integrate the consequences of liberalisation. Higher-level policy statements – as well as some academic work outside of the economic regulation community<sup>22</sup> – concerning the need to introduce new technologies, to carry out investments, to make services available to everyone, etc. often read as if policymaking flowed seamlessly into operations, themselves still in the hands of the incumbents. These policymakers and academics may still be too tied to the former model and might not yet have integrated liberalisation in their work. With liberalisation, even major operational decisions concerning investment are in the hands of the private firms on the market. The lawmakers and regulators are no longer concerned with ‘the network’ of the incumbent, but rather with the virtual ‘network of networks’ formed by the operations of all the private firms active on the market. Public authorities can then no longer engage in hands-on management, but must rather try to influence the operation and evolution of this elusive network of networks in the desired manner.

Indeed, whilst lawmakers and regulators must let go of a network industry such as electronic communications and let it evolve on its own motion, they must also be able to judge whether the sector performs at a level that meets public policy objectives, as they might have been defined through political processes. In order to do that, they must therefore have an expectation of how the electronic communications sector should evolve, so as to be able to make an assessment. Therein lies a paradox: authorities must at the same time accept that their mission is not to remove uncertainty (and thus leave the industry on its own) and have an idea of how such uncertainty could and should unfold (in order to be able to carry out the basic regulatory function of assessing whether intervention is necessary).

This paradox can be solved if one takes the principles of the current EC electronic communications regulatory framework seriously. When it was hammered out at the beginning of the decade, the intention was to create a regulatory framework which could withstand the test of time and remain adequate as the sector evolved. The regulatory review under way at EC level<sup>23</sup> indicates that the key design choices were by and large right, since they are not challenged by anyone. The two most important design principles of the current regulatory framework for the purposes of the present discussion are (1) reliance on economic analysis (as evidenced by a substantive alignment with competition law) and (2) technological neutrality. The former implies that the authorities must base their analysis not on technological considerations, but rather on economic and functional considerations. This can be seen most clearly in the regulation of market power (the so-called ‘SMP regime’), but universal service regulation has also been cast mostly in economic terms.<sup>24</sup> Accordingly, the expectations of the authorities can be formulated in economic terms (no bottlenecks, no network externalities, adequate market performance, etc.). The latter principle is still a work in progress.<sup>25</sup> Amongst possible interpretations of technological neutrality, the most powerful and most meaningful would entail that public authorities do not interfere with technological choices which properly belong to the market.<sup>26</sup> This would dictate that the action of public authorities be carried out at a certain level of abstraction and that reliance on technological categories be avoided as much as possible, so as not to pre-empt choices in favour or against a certain technology.

In summary, the ramifications of the basic economic policy choice made twenty years ago for the liberalisation of network industries such as electronic communications might not yet have been fully explored. Of course, liberalisation does not mean that public policy objectives are abandoned altogether; the polity retains the upper hand over the economy. However, it does imply that lawmakers and regulators must let go of the industry, and, in particular, that they must reckon with the inherent uncertainty surrounding the evolution of this sector. It would be neither appropriate nor in line with the principles of the electronic communications regulatory framework as set out in EC law for public authorities to want to superimpose a holistic vision (typically a layer model) on the sector and exert significant influence over its evolution. Nonetheless, these authorities must be able to ensure that public policy objectives are fulfilled, which implies that they

must have a vision of how the ‘network of networks’ under their supervision are meant to evolve and perform. That vision, however, must focus not on technology but on economic and functional categories. It is also bound to be fragmentary: public authorities should only be concerned with those elements in the electronic communications sector which cause concern in view of the expectations based on these economic and functional categories.

### **Regulatory externalities**

Another consequence of liberalisation is that it highlights the externalities created by the use of regulation as a means of intervention in the workings of the economy, when the costs of regulation for private firms are not correctly taken into account in the decisions of public authorities.

Indeed, using regulation is advantageous for public authorities, since it involves limited expense (administration of the regulatory framework), given that the costs of complying with regulation and fulfilling the regulatory objectives lie with the regulated firms. This point has not been lost in EC law, where the ECJ acknowledged that the redistributive effects of regulation do not turn it into state aid (which would then be subject to control by the Commission).<sup>27</sup>

There are, however, limits to the redistributive effects of regulation in a competitive market setting. These effects can give rise to an externality if they are ignored, i.e., the public authorities or the ultimate intended beneficiaries receive the benefits of the regulatory measures, but the costs are borne by firms. If the externality becomes too important, it will influence the behaviour of firms in a way which was not intended by the public authority. Concretely, if the regulatory environment for investment by private firms creates important negative externalities for these firms (via an intrusive access regime or a universal service obligation), private firms will respond by changing those parameters in their behaviour which they can still control: investment plans will be revised downwards or cancelled altogether.

In earlier years, during the ‘fat-trimming’ phase, it could be argued that the fat, i.e., the monopoly rent, was actually being redistributed. Given that this rent arose out of incumbency, where public funds had been used in the past to build up the monopoly infrastructure, one could argue that it was legitimate to ignore the externality. Nowadays, when new large-scale investments must be undertaken on a forward-looking basis, the situation is different. Rents have largely dissipated; in any event, newcomer firms never enjoyed them. For all these firms, incumbent and newcomer alike, the financing of new investments comes partly from earnings, and is partly obtained from third parties via financial markets.<sup>28</sup> There is no obvious reason why these funds should be available for redistribution via regulation.

If public authorities want to exert an influence on investment in infrastructure, therefore, they must take the costs imposed on private firms into account. So

either the intervention takes place in such a way as not to distort investment incentives, or if it is more intrusive, then public authorities must correct the externality by disbursing public money to compensate private firms.<sup>29</sup> Public authorities cannot have their cake and eat it too, by shifting the burden of infrastructure investment onto private firms in the wake of liberalisation and then expecting these firms to pursue public policy objectives in the same way as former state-owned monopolists did.

In electronic communications regulation, the Universal Service Directive also contains detailed provisions on the use of public funds to compensate the firm providing universal service.<sup>30</sup> It is interesting to note that the Access Directive does not provide for any possibility of public funding to compensate for the cost of SMP obligations, indicating perhaps that it was never foreseen that SMP obligations could have such side effects on investment incentives as to require public funding.

## **7.2 THE CASE OF ELECTRONIC COMMUNICATIONS**

### **7.2.1 WHAT MAKES ELECTRONIC COMMUNICATIONS ESPECIALLY RELEVANT**

When it comes to economic regulation at EC level, the electronic communications sector is always very interesting. First of all, electronic communications is the poster child of EC liberalisation policies. It is the first sector where the EC pursued a liberalisation policy at the end of the 1980s. It remains to this day the most successful instance of liberalisation initiated at the EC level. It is also the only sector where the Commission used strong-armed tactics, with the help of Article 86(3) EC and competition law proceedings, to bring member states to support its policy. Finally, electronic communications remains widely perceived as the front-runner amongst liberalised sectors, where the policy and legal developments are the farthest; accordingly, it often serves as an example in comparable sectors, mostly other network industries.

The shift in policy focus from fat-trimming to investment in infrastructure in particular, can be easily observed in electronic communications. Twenty years after the start of electronic communications liberalisation, with the 1987 Green Paper, and almost ten years after the removal of the last monopoly rights in 1998, the 'fat trimming' operation has been largely successful, in some areas even beyond expectations. Instead of having large incumbents with competitive fringes keeping them under pressure, the incumbent in many member states has bled and is still bleeding market share.<sup>31</sup> The competitive fringe has become a set of well-established 'mainstream' competitors. Now the initial asset base of the fixed-line incumbent is no longer sufficient to guarantee a satisfactory level of innovation.

As far as mobile communications are concerned, the above described narrative never really had much relevance in any event, since second-generation services (GSM) were introduced at least on a duopoly basis, which was later extended to

three or four network operators, not counting the virtual operators (MVNOs) that appeared later.

For the whole of electronic communications, therefore, the paradigm for market regulation is changing, away from fat-trimming and towards fostering investment in the infrastructure needed to continue to innovate.<sup>32</sup> That makes electronic communications an entirely relevant example for comparable sectors which might find themselves at a similar juncture.

### 7.2.2 WHAT MAKES ELECTRONIC COMMUNICATIONS DIFFERENT

However, some characteristics of electronic communications also make it a special case, which should not be generalised too quickly.

In all of the network industries, investment is affected by a measure of uncertainty, if only because of its long time horizon. In electronic communications, however, that uncertainty is especially large, as a consequence of a number of factors.

First of all, technological evolution is as uncertain as it is rapid. In contrast to energy or transport, whose basic products are well-known, limited in number and only slowly evolving, electronic communications is experiencing a constant stream of new products and services.

At the technological level, a number of ‘paradigmatic changes’ are taking place. None of these changes are particularly sudden, having been predicted for the past twenty years. Nevertheless, it seems that they are finally happening now. The backdrop to most of these changes is ‘convergence’, a concept which has been used and abused to cover a number of different situations.<sup>33</sup> At the most fundamental level, however, these situations all have in common that formerly distinct, vertically-integrated, narrowly-defined sectors, such as fixed telephony, mobile telephony, broadcasting, etc. are merging into a broadly-defined electronic communications sector,<sup>34</sup> characterised by a much greater variety of service offerings, business models, demand patterns, etc. The converged sector can only be comprehended with more abstract concepts such as communication, access, community, usage, mobility, information, etc. Any more specific descriptions – for instance at the level of a service such as SMS – are bound to be partial and incomplete.

Convergence implies that electronic communications networks essentially carry data packets, which can be used to convey all sorts of content indifferently. Accordingly, new types of content, which straddle traditional categories – think in particular of so-called ‘Web 2.0’ applications such as YouTube, etc. – appear and generate considerable interest. At the same time, network operators lose control over the content broadcast over their networks, unless they themselves move up the value chain into content, a business which they are generally unfamiliar with and ill-prepared to undertake. As the content business booms, network operators fear that their own line of business could become commodi-

fied, all the more now that competition is biting and margins are being compressed.

In addition, to the threat of commodification, network operators also face the prospect of large-scale investments to upgrade their facilities. Indeed, as a general proposition, it is safe to assume that the current networks – both fixed and mobile – will not be sufficient to satisfy user requirements in the long run. Services and applications are ever more bandwidth-hungry, with the crunch coming from high-quality video.<sup>35</sup> At this juncture, the backbone (core) of fixed and mobile networks has already been upgraded to fibre, in order to meet bandwidth demands, but the extremities – the local networks – prove more problematic. For fixed networks, various XDSL<sup>36</sup> solutions have enabled the existing copper networks to extend their lease on life for the past 15 years,<sup>37</sup> but ultimately the upgrade to full-fibre networks seems unavoidable. The only question is the timetable.<sup>38</sup> As for mobile networks, the upgrade to 3G networks is proving very costly and could be running behind bandwidth requirements, with cheaper and better performing solutions such as WIMAX rising as alternatives. Indeed, the deployment of 3G networks is indicative of the kinds of problems which network operators are facing and the type of solutions which they might have to implement. In many countries, especially those which exacted large license fees from operators through spectrum auctions, network operators had to co-operate extensively for network deployment once the bubble burst in 2000 and they were brought back to their senses.<sup>39</sup>

Furthermore, customer demand itself remains unclear. Indeed, besides the few cases of ‘calculated success’ (GSM), recent history is littered with instances of unforeseen technological developments which shook up the sector (rise of the Internet), as well as predictions which failed to materialise (convergence stories from the early 1990s) or were outright failures (work on HDTV standards in the 1990s). Predictions only become harder to make in a competitive environment where customers have choices, both synchronic and diachronic (older and future offerings are also part of the picture). Therefore, in addition to the uncertainty as to technological evolution, the evolutionary factors have been expanded beyond mere supply-driven technological progress to include hitherto less relevant demand-side factors such as network effects,<sup>40</sup> response to customer needs, etc. As a consequence, marketing and advertising might now be as important a factor as intrinsic technical quality in determining technological evolution.<sup>41</sup> This only adds to the level of uncertainty.

Once again, the upgrade to 3G networks illustrates this reality well. Gone are the days when engineers developed basic services such as fixed or mobile telephony, which fulfilled widespread needs and were in any event offered to prospective customers on a take-it-or-leave-it basis. Indeed, with the perspective of penetration rates beyond 80%, it is reasonable to embark on large-scale network deployment.<sup>42</sup> Demand is now much more uncertain. In comparison to 2G (GSM/GPRS) networks, 3G brought increased data rates, improved features and some new

services,<sup>43</sup> but not a revolutionary new proposition. Accordingly, the uptake of 3G has been slow, and most of all the uptake of new 3G services, on which operators are relying to earn returns on their investments, has been even slower.<sup>44</sup> The same can be observed in the fixed realm: the Internet is bustling with new and innovative services, all of which seem to respond to some demand. Nevertheless, none of these services seems set to become as widespread as voice communication or even e-mail. Blogging and other user-driven Web 2.0 applications are all suitably hyped, but they do not reach more than a fraction of the general population. Whether they ever will is open to debate.<sup>45</sup>

The uncertainty is compounded, in the current context, by the liberalisation wave of the 1990s, which led to more open markets. This implies, firstly, that technological progress is now a competitive factor, thus increasing the chances that operators and providers will try to introduce differentiated technological solutions and leave the market (i.e., customers) to make choices regarding preferences.<sup>46</sup> Moreover, competitive pressures may accelerate the rate of technological evolution. Of course, one could say that this flurry of innovation takes place at higher levels and that basically, electronic communications is moving from a number of discrete narrowband offerings to a more generic broadband communications offering; however, this would ignore that demand will largely be dictated by higher-level applications and services.<sup>47</sup>

In sum, network operators are facing the following conundrum: they are fighting against the commodification of their business, and they are also losing control of the factors that influence demand, since demand is driven increasingly by the offerings of content, service and application providers. They are more or less compelled to invest further in their networks (given the competitive situation): incremental investments can only take operators so far, and, in the long term, multi-billion euro expenditures to improve local networks (with fibre and with next-generation mobile technology) are unavoidable. Furthermore, customer demand is more uncertain than ever before.

### 7.3 MAJOR ISSUES CURRENTLY RAISED IN ELECTRONIC COMMUNICATIONS

The Commission is currently carrying out a review of EC electronic communications regulations,<sup>48</sup> which has resulted in a series of proposals in November 2007. A key topic – if not the main topic – in the discussions so far has been how to find the right regulatory policy to foster investment. The discussions have already highlighted a series of fundamental issues which are tackled here, namely:

- the appropriateness of structural solutions, in particular, the separation of certain elements of electronic communications networks (the local networks) from other activities;
- in the alternative, the optimal behavioural regime, especially lighter regulatory treatment for vertically-integrated firms conducting major infrastructure investments (often brought under the heading of ‘regulatory holiday’);

- in any event, the extent to which co-ordination is required at the EC level, including the creation of a European-level authority.

### 7.3.1 STRUCTURAL SOLUTIONS – FUNCTIONAL SEPARATION

In its proposals, the Commission has endorsed the UK model of functional separation, whereby investors in local infrastructure – in particular incumbents holding SMP – are required to place their local infrastructure activities in a separate subsidiary or at least in a separate division. The rationale behind that policy is that the local infrastructure is likely to remain a natural monopoly – or at least a bottleneck – in most locations in the EU. By putting such infrastructure in a separate entity, which deals with all firms competing to use the local infrastructure on an equal basis, the incentives for discrimination will perhaps vanish altogether.

The experience in the UK – as well as in other network industries such as rail transport – shows that separation is perhaps more geared towards ensuring a level-playing field between competitors than fostering innovation and investment in non-competitive activities. The benefits of vertical integration are lost: the entity in charge of the non-competitive activity no longer receives clear signals from the rest of a larger firm, so as to guide investment decisions. Rather, the non-competitive activity is exploited under a heavily regulated regime, which unless perfectly designed is bound not to provide the right incentives for dynamic efficiency.

More fundamentally, regulating by drawing lines through an industry – be it between local infrastructure and the rest, or between transport and production – often implies that lawmakers and regulators base their action on more or less elaborate models which should reflect the structure of the industry. Sometimes the models are even meant to anticipate the evolution of the industry. The industry is divided up, each of the parts is then defined<sup>49</sup> in the law or regulation, and depending on where a firm's activity falls within that set of legal definitions, legal consequences follow. In my view, this approach is flawed. It ignores the consequence of liberalisation sketched above. The regulatory authorities must let go of the sector and avoid regulating according to all-encompassing models.

### 7.3.2 BEHAVIOURAL SOLUTIONS, INCLUDING REGULATORY HOLIDAY

If structural solutions are not used, it is interesting to look at how regulation can be designed to minimise the negative impact on the investment incentives of vertically-integrated firms. We look more precisely at the two main parameters of regulation, namely its timing (A) and its intensity (B).

#### **A. Timing: The abusive use of *ex ante* and *ex post***

A key issue in economics is whether regulatory intervention takes place *ex ante* (defined as prior to any investment being conducted) or *ex post* (once the invest-

ment has taken place). Two different strands of thought appear to lead to opposite conclusions. If one follows a more public choice approach, where the risk of government failure is a central concern, *ex ante* intervention must be done with great caution. The overarching concern is to avoid Type I errors (false positives, i.e., unwarranted regulatory intervention), which are perceived as more damaging than Type II errors (false negatives, i.e., failure to intervene when warranted). Type I errors deprive society of the benefits of what would have been allowable activity, and it is doubtful whether that activity can be resumed once the error is corrected. In contrast, Type II errors, if caught, can be corrected by subsequent intervention and corrective measures. Given that *ex ante* intervention is by definition more prone to error because of its speculative nature and that Type II errors can be corrected *ex post*, *ex ante* intervention should be minimised in order to reduce the risk of Type I error.

A game-theoretical analysis takes a different perspective. On the assumption that investment is a two-stage game, if the investor plays first, uncertainty as to the behaviour of the regulator (interventionist or not) will lead the investor to be cautious with investment or even to refrain from it. If the regulator plays first and discloses its position (however interventionist), then the investor can decide in full knowledge about the behaviour of the regulator, without a discount for uncertainty, and will simply invest in accordance with the incentives given by the regulator. Game theory would therefore support *ex ante* intervention. This analysis is subject to a key caveat, however: the time span for infrastructure investments is considerable (twenty years and more), and, in practice, it is difficult to see how a public authority can make a credible regulatory commitment for such a long period. Ultimately, the legislature can always respond to the political climate of the moment and decide to cancel a commitment made years ago, even if it was made by the legislature itself.

These two lines of analysis appear to contradict each other, however it should be underlined that, whereas public choice is concerned with the intensity of intervention (including whether there should be any intervention at all), game theory is more concerned with timing, independent of intensity.

A number of interested parties (network operators, potential investors, etc.) have merged the two lines of analysis as follows. From a game-theoretical perspective, it follows that regulatory authorities should commit themselves early in order to remove uncertainty on the side of the investors. However, in light of the high level of uncertainty as to the evolution of electronic communications, as sketched out earlier, the risk of a Type I error at an early stage is overwhelming, and therefore it would be advisable to refrain from regulatory intervention. If one follows that line of reasoning, in the end, the regulatory authority should commit early to not intervene at all and let investors carry out their investments unhindered by regulation. This is the reasoning behind the German proposal to grant Deutsche Telekom a 'regulatory holiday' for its investments in broadband infrastructure (see further below).

On the legal side, the arguments for an *ex ante* commitment to minimize regulation (if any) are coated with the mantle of legal certainty: there will be too much legal uncertainty without prior commitment, so that investments will not be undertaken. At the outset, it must be emphasised that legal uncertainty is a different issue than market uncertainty – due to technological evolution and the vagueness of demand – described earlier.

The reasoning set out in the previous paragraphs is problematic in a number of aspects. As a preliminary remark, the *ex ante* – *ex post* distinction is not as hermetic as economic literature would make it out to be. Typically, decisions that would be qualified as *ex ante* are actually taken on the basis of historical data on the sector<sup>50</sup> and *ex post* decisions have a few *ex ante* elements in most cases.<sup>51</sup> Similarly, it is inaccurate to assimilate *ex ante* intervention with sector-specific regulation, and *ex post* intervention with competition law.<sup>52</sup> In the end, the distinction is best understood as a matter of degree: *ex ante* intervention takes place on the basis of a larger number of analytical assumptions and extrapolations than *ex post* intervention, which is based on a more solid evidentiary basis.

Similarly, it is worth examining the concept of legal uncertainty in greater depth. In a study for the Commission,<sup>53</sup> London Economics surveyed private firms and explained what the latter understood by legal uncertainty, which included three distinct concerns: (I) the law is not clear, (II) NRA decisions across the EU go in different directions and (III) the law is insufficiently monitored and enforced. For a lawyer, it is strikingly odd that these three concerns would be lumped together. After all, they are distinct and call for different solutions: (I) lack of clarity in the law can be addressed with further elaboration (through the legislature or a regulatory authority), (II) greater co-ordination between NRAs can improve the coherency of the overall decision practice and (III) a patchy enforcement record requires that more resources be devoted to enforcement (or a more efficient use of existing resources). All in all, the legal certainty moniker is used to cover concerns that do not belong together. Concern III, in any event, is somewhat foreign to the discussion. Let us then assume that investors are, in fact, seeking to have as much clarity on the substance and as much co-ordination between the NRAs as possible.

More fundamentally, the claims of interested parties as set out above remain stated preferences. As long as the major policy decisions on infrastructure investment have not been taken, so that the absence of regulatory intervention remains an option, it is understandable that interested parties will state that they prefer that option. Let us assume for the sake of argument that public authorities do decide to commit *ex ante*, but not to refrain from regulation. Rather, they propose a relatively detailed regulatory regime comprising third-party access obligations and price regulation. If the range of possible options is suddenly reduced to a choice between significant *ex ante* regulation and the possibility of some regulatory intervention of unknown intensity later on, then the demand for an *ex ante* regulatory commitment would likely disappear. In other words, we do

not know the real preferences of interested parties, and their claims must therefore be discounted if not altogether ignored.

Should regulatory intervention then, if any, be carried out *ex ante*, i.e. should a regulatory regime be imposed from day one, before investments have even taken place? Here again, the risk of a Type I error in a context of high uncertainty appears too considerable: why should the NRA, standing at a distance from both supply and demand, be able to predict accurately how major investments will evolve? Moreover, according to both the game-theoretical analysis and the legal certainty argument, unpredictability is a greater problem than timing. It was pointed out above that the *ex ante* / *ex post* distinction is much too sharply drawn. Using a more nuanced timeline, it seems that the most appropriate course would be to refrain from heavy intervention *ex ante*, while at the same time setting out clearly the parameters under which any *ex post* intervention would take: an *ex ante* commitment to intervene *ex post* only under certain circumstances. In addition, setting out the parameters for intervention at the outset could moderate the temptation for public authorities to renege on commitments later on, since the polity can already agree on which future outcomes are acceptable or not (as opposed to binding itself to a present-day assessment which might prove completely off the mark).

## **B Intensity**

Investors need a measure of stability to be able to plan their investments. Of course, overly intrusive regulation reduces the incentive to invest. What is then the appropriate regulatory course?

### *The mirage of regulatory holidays*

Recommendations for a ‘regulatory holiday’ to foster investment now abound, as introduced above. They appear to be misguided. They assume that the relationship between competition law and sector-specific regulation in the EU is governed as it is in the US. There, as the Supreme Court confirmed in *Trinko*,<sup>54</sup> if sector-specific regulation has a ‘structure designed to deter and remedy anti-competitive harm’, if it ‘performs the antitrust function’,<sup>55</sup> then competition law will no longer be applicable once a regulatory determination has been made. A regulatory authority can thus grant a true regulatory holiday: once it has conducted an economic assessment so as to fulfil the ‘antitrust function’ and comes to the conclusion that no intervention was necessary, they will also be exempted from the application of antitrust law. This is what the FCC has done in recent years when it implemented broadband deregulation.<sup>56</sup> In contrast, in the EU, the application of sector-specific regulation cannot prevent competition law from applying as well, as the Commission has ruled in *DT*.<sup>57</sup> In the EU, due to its place in primary EC law, the application of competition law cannot be excluded *a priori* simply because a regulatory authority has already conducted an examination of the same market.<sup>58</sup> Accordingly, if a member state in its wisdom decides to grant a regulatory holiday to firms – leaving aside a probable breach of EC law<sup>59</sup> – it can only remove the threat of regulatory intervention from the NRA pursuant to national electronic communications

legislation. Whilst that might be the most immediate and significant threat, competition law remains applicable. Even if the NCA were to somehow also be tamed by the member state in question, the Commission can still intervene pursuant to EC competition law. Furthermore, current EC competition policy fosters private enforcement of competition law, so that the competitors or customers of the firm are able to seriously disturb its regulatory holiday through competition law claims brought before national courts.

Furthermore, abstaining from any regulation (regarding granting a regulatory holiday), while appealing to investors, is difficult to justify from a social perspective. Given the uncertainty surrounding the evolution of the electronic communications sector, a regulatory authority cannot safely predict that no concerns will eventually arise in the future, thus justifying an immediate forbearance of regulation. For instance, it cannot be predicted that the new infrastructure in which investment is being poured will not become a bottleneck and enable its holder to extract monopoly rents or engage in exclusionary behaviour. This could happen because of strategic behaviour on the part of the investor, but it could just as well be an ‘unintended’ consequence of technological evolution, economic conditions, decisions by competitors or a shift in demand, among others. So there must be some room to intervene in pursuit of public policy objectives.

### ***The general risk associated with investment as a standard***

How are the parameters for intervention to be set if investment is not to be discouraged? Some inspiration can perhaps be obtained from German legal doctrine. In contemporary German legal thought, members of society are all expected to bear some risk, the so-called general level of risk associated with carrying out an activity or even with human existence in society (*allgemeines Lebensrisiko*).<sup>60</sup> Similarly, there is no risk-free investment in our day and age; every investor is expected to be able to live with a certain level of risk surrounding one’s investment. A US-style regulatory holiday – including relief from competition law – appears excessive precisely because it amounts to shifting entirely onto the public authority the risk surrounding the evolution of the market, more specifically the risk that the evolution of the market would be such as to warrant regulatory intervention to ensure the fulfilment of public policy objectives. The investor who benefits from a regulatory holiday is thus placed in a privileged position, certainly in comparison with investors in other sectors. As a guiding principle, I would suggest that *the law should strive to place investment in infrastructure projects on the same footing as investment in comparable large-scale projects not involving infrastructure*. This does not mean that there is no risk of regulatory intervention, but at least a commensurate amount of risk.

The one regulatory risk to which every investor is exposed to is that, once the investment is made, competition law would subsequently come to apply in such a way as to affect returns adversely. It remains unclear whether competition law is

in itself sufficiently well circumscribed to minimise the disincentive for investors;<sup>61</sup> in any event, it is applicable across the whole economy.<sup>62</sup>

Beyond that, public authorities should tread carefully. For instance, it is advisable to place specific regulatory risks (i.e., the risk that sector-specific regulation applies) in the shadow of competition law. This is precisely the thrust of EC electronic communications regulation, in particular the SMP regime, with its reliance on economic analysis. Typically, SMP regulations remain close to competition law so that markets are defined along lines similar to competition law, SMP is assimilated to dominance, and the available remedies are broadly in line with what could be imposed under competition law.<sup>63</sup> The main difference is institutional: sector-specific regulation is enforced more systematically and more swiftly than competition law. To the extent that SMP regulation goes beyond what is possible under competition law, it relies on economic analysis in any event.

### **Proposal**

With respect to the above, public authorities should set out *ex ante* a scenario for the evolution of the sector, based of course not on technological but on economic and functional considerations. Presumably, considering the uncertainty, it would be preferable to set out negative scenarios, i.e., undesirable outcomes, which are defined as a set of parameters which trigger intervention if they are found. For instance, an authority could announce that it is objectionable when:

- bottlenecks are created or recreated, giving their holder excessive market power;
- no access agreements are concluded with third-party competitors (acting in good faith), given that the expectation is that allowing such access would allow the investor to increase returns on investment; or
- initiatives to ensure industry-wide interoperability or compatibility are thwarted.

As for those public policy objectives that cannot be placed entirely in the shadow of competition law, for instance universal service and citizen rights, public authorities could limit the disincentive to investors by committing themselves at the outset to attaching appropriate financial compensation to any subsequent intervention. For instance, if an investor wants to roll out fibre at the local network level wherever it is commercially feasible, public authorities could already decide not to include fibre-based connections within the scope of universal service without appropriate compensation for the net costs.

The approach scenario sketched out above would have the advantage of providing a measure of certainty to investors thus reducing the disincentives arising from the risk of regulatory intervention, yet, without forcing public authorities to immediately determine the content of a regulation and thereby very likely commit Type I errors.

### 7.3.3 THE NEED FOR CO-ORDINATION ACROSS THE EU

Another concern of investors, as mentioned above, is the lack of co-ordination among NRAs. Here as well, claims should be taken with a grain of salt. Of course, if all NRAs are in line with each other and they take a hands-off approach to regulation in order to foster investment, it is easy to see why investors would be satisfied. But if NRAs co-ordinate their actions perfectly and opt for heavy *ex ante* regulation of markets where large investments are being conducted, would investors be so keen on co-ordination or would they not prefer some level of divergence, so that at least some NRAs take a lighter regulatory path? In other words, what is the value of co-ordination and how much of it is needed?

#### ***Arguments in favour of co-ordination: spillovers/externalities, transaction costs, level-playing field***

The arguments in favour of co-ordination are well rehearsed and can be summarised quickly. First, there are cases involving NRAs decisions that produce spillover effects or externalities in other jurisdictions. There co-ordination is required to avoid regulatory failure. The regulation of roaming provides an example where NRAs could not be brought to act, because if an NRA intervened on roaming, its intervention would impose costs on the providers within its jurisdiction, but to the benefit of users from other jurisdictions.<sup>64</sup> In cases involving spillover effects and externalities, the case for co-ordination is fairly strong; at the same time, given repeated interactions between the NRAs on various files, there are incentives to co-ordinate without outside compulsion.<sup>65</sup> Secondly, transaction costs are also frequently invoked: it is expensive for firms (and sometimes for users as well) to deal with different regulations across the member states of the EU. Contrary to spillovers/externalities, however, the transaction cost argument must be seen in a broader context because, after all, there may be greater benefits from having different regulatory solutions, which offset transaction costs. A variant of the transaction cost argument is the level-playing field argument where regulation should be the same across the EU because regulatory divergences create an imbalance between operators (at least in fixed communications), depending on where their home base is. Here as well, there may be good reasons for member states opting for one or the other regulatory option, even when taking into account the impact on the level-playing field. Despite their relativity, the transaction cost and level-playing field arguments resonate very deeply at the EC level, since they are linked to the two central EC policies, market integration and undistorted competition respectively.

#### ***Local circumstances and local preferences***

On the other side, there are two major reasons why on some level divergence between NRAs might be tolerated. The first one is fairly intuitive: perhaps local differences justify different approaches. The second one is less straightforward but, nonetheless, important given the high level of uncertainty: there should be some room for 'learning-by-doing' or what I would call 'regulatory emulation'.

The first reason why a measure of divergence can be desirable is that local circumstances differ. Of course, electronic communications regulation makes room for NRAs to reach different conclusions because the facts (industry structure, geographical configuration, population density, etc.) in their respective jurisdictions are different. In that case, the role of NRAs would be narrow, limited to a fact-finding function. The NRA would then deliver added value because of its close proximity to the playing field, which makes it better able to ascertain the situation accurately. Nevertheless, it would essentially be ‘filling in the blanks’ in order to complete processes where the main decisions have been taken elsewhere.

It seems that a broader vision is more adequate. It would also ascribe a policy-making function to the NRA. The NRA would then not only engage in fact-finding, but also enjoy the ability to make certain policy determinations, to the extent that the trade-offs made earlier in the decision-making chain would need further refinements. The EC electronic communications framework does not expressly choose between these two models, but there are a number of significant indicia which point towards the broader definition.<sup>66</sup>

Furthermore, since 2003, the practice shows that NRAs see themselves as endowed with policy-making functions and actually engage in policy-making. At any rate, the NRAs acting collectively in the ERG do deal with policy issues, which would imply that they individually possess the power to deal with those issues.

Moreover, as is clear from the discussion earlier in this essay, the regulatory decisions taken by NRAs – especially when it comes to investment in infrastructure – are best seen as trade-offs against a background of uncertainty. There is no right answer, and thus it can be expected that different authorities – two or more NRAs or an NRA and the Commission – would reach different conclusions, without necessarily implying that one authority is completely wrong.

### ***Regulatory emulation***

Considering the inherent uncertainty surrounding most of the major regulatory decisions, some measure of ‘learning-by-doing’ seems appropriate, in order to avoid the risk of massive failure if all authorities followed the same approach, imposed in a top-down fashion. Moreover, NRAs are closer to the playing field and can respond more flexibly to new developments than when their action is co-ordinated at EC level. An important pre-condition for these positive effects to occur, however, is that NRAs do take a European perspective and interact with the work of their peers.

Such a bottom-up emulation process is not necessarily indicated in all cases. A trade-off must therefore be made between the advantages of consistency and those of learning-by-doing via slight discrepancies. The former are mostly static and the latter, dynamic. Obviously, where there is broad consensus already (e.g., retail markets), it may be more preferable to insist on consistency. In contrast,

when a number of reasonable options are open to the regulatory authority, it may be sensible to allow some measure of divergence in order to reduce the risk of failure, even if this imposes some costs in the shorter term. Experience will then help to discern which option turns out to be more adequate. At first sight, one might think that these situations arise only as regards remedies, but emulation might also be useful for certain issues relating to market definition<sup>67</sup> and the assessment of SMP.<sup>68</sup>

Where relying on emulation is appropriate, we should see how NRAs from smaller jurisdictions would attempt to innovate on regulation ('maverick' behaviour) in order to try to position their jurisdiction better in comparison to larger jurisdictions. Other NRAs would keep a close eye on these developments, in order to see which of the 'maverick' NRAs appeared to have made the best choice for its jurisdiction. Discussions would ensue within and outside of the ERG, with some benchmarking and other similar exercises, until some best practice emerges. NRAs from larger jurisdictions would typically refrain from maverick behaviour, given that the gains achieved for them are dwarfed by the risk of losses when regulatory choices turn out to be inappropriate. They would move at a later point, and their decisions would most likely establish what the best practice is.

Unfortunately, in electronic communications, we have witnessed something quite different. Typically, an NRA from a large jurisdiction takes the lead in conducting market assessments and deciding on remedies. Historically, this role has fallen to the British OFCOM (and its predecessor OFTEL), but it appears that other NRAs, in particular the French ARCEP, have also been assuming this role nowadays. The Commission is closely involved with this NRA, and will endorse its approach. Subsequently, in its Article 7 comments on draft measures presented by other NRAs, the Commission will stick to the line set out in the first major case, all the more so if it considers that it must achieve 'consistency' and 'coherence' across the EU. As a consequence, NRAs from smaller jurisdictions are prevented from engaging in maverick behaviour. Similarly, NRAs – from larger or smaller jurisdictions – that arrive late with their draft decisions will have little if any room to stray from the 'consensus'.

### ***Division within the Commission regarding appropriate level of co-ordination***

The task of balancing between the need for co-ordination and the benefits to be achieved by allowing NRAs to reach different decisions has been delegated to the Commission on a case-by-case basis, through a review of NRA decisions, more specifically a review of the market definition and the SMP determinations proposed by the NRAs.

Indeed the SMP procedure (pursuant to which most NRA decisions are taken) rests on a division of tasks between the Commission and the NRAs: the Commission, via the Guidelines on market definition and SMP<sup>69</sup> and the Recommendation on relevant markets,<sup>70</sup> already carries out a significant portion of the SMP

procedure. In doing so, it effectively sets the parameters for the work of the NRAs.<sup>71</sup> As the recitals to Directive 2002/21 indicate,<sup>72</sup> the Commission is entrusted with this work in its capacity as ‘guardian of the Treaty’, given that (i) EC competition law, where the Commission has the lead role, is used to provide guidance for market definition and assessment; and (ii) some co-ordination is needed in the interest of the internal market. When subsequently reviewing the draft of NRA decisions under the procedure of Article 7 of the Framework Directive, the Commission can impose a two-month suspension of the NRA draft measure with a possible veto if ‘it considers that the draft [NRA] measure would create a barrier to the single market or if it has serious doubts as to its compatibility with Community law and in particular the objectives referred to in Article 8 [of Directive 2002/21].’ Article 7 must be seen in the same light: the Commission must be consulted because of its obvious interest in competition law and the internal market, and it even receives a limited veto right to safeguard these interests. A mere divergence of opinion between the Commission and the NRA (or between NRAs) is not sufficient to justify a Commission veto.

Unfortunately, the Commission tends to see itself as a form of review instance, which then double-checks on the decisions made by the NRAs.<sup>73</sup> In its Article 7 practice since 2003, the Commission has indeed allowed diverging measures (or at least diverging lines of reasoning) to stand in a number of situations. However, in its Communication on the Article 7 procedure<sup>74</sup> and in its 2006 Review Communication,<sup>75</sup> the Commission sets a different standard, namely ‘consistency’ or ‘coherency’ across the EU. These terms are not defined any further, but it is difficult to escape the conclusion that they mean a single harmonised solution across the EU.<sup>76</sup> In addition, in the current round of review, the Commission is proposing to extend its veto power over the remedies part of NRA decisions as well. That proposal is problematic. It might be preferable to work with the ERG instead: the Common Position on Remedies can be further improved, and the ERG should be encouraged to engage more systematically in benchmarking and peer review.

It is interesting to note that, while the Commission advocates a high level of co-ordination – close to harmonisation – for NRA decisions under electronic communications regulation, it also manages to be very responsive to local circumstances in the application of state aid law to major infrastructure projects in the electronic communications sector. These projects essentially consist of the laying of broadband networks in various technical configurations (typically based on fibre). Member states often extend financing to enable such networks to be rolled out in allegedly disadvantaged areas. Over the past few years, the Commission has accumulated considerable practice in the area, with some 22 decisions up to the end of 2006. As summed up by Commission officials,<sup>77</sup> the Commission distinguishes on a geographical basis between ‘white’, ‘grey’ and ‘black’ areas. ‘White’ areas are those areas where no broadband services are available, and where state aid for an infrastructure will usually be permitted within certain limits. ‘Grey’ areas are those where some broadband services are already provided

(generally using ADSL over the existing network): the Commission is more cautious here, given the presence of some offerings. 'Black' areas are characterised by the presence of two or more competing broadband networks, usually relying on the cable TV network (HFC) and the legacy telecommunications network (ADSL). In these areas, broadband deployment is thus already under way in a competitive environment, and the Commission will not accept that the state injects public funds to pre-empt (or 'crowd out') private operators by establishing a third, unique fibre-based network. There has been only one case of a 'black' area thus far, concerning a project in Appingedam.<sup>78</sup>

These cases, especially *Appingedam*, reveal how the Commission construes the hierarchy between the various policies of the EU concerning electronic communications infrastructure. As long as no competition issue arises (in the white areas, which are not served at all), the Commission will allow state aid to roll out infrastructure, knowing full well that this is the only option for bringing broadband services to the area in question. Under the circumstances, the best that can be hoped for is service-based competition. In the grey areas, the situation is more ambiguous: rolling out a fibre-based network could promote competition to the existing offerings, thereby delivering infrastructure competition. Furthermore, fibre-based networks are introduced more rapidly than would otherwise be the case, which is in line with the general policy objectives concerning broadband. At the same time, the existing offerings – usually ADSL on the legacy electronic communications network – could be a poor match for fibre-based broadband, especially if the latter is publicly financed to help bring down its cost. In the end, the network that is ultimately rolled out with state support could end up alone in the market, which might not be a desirable outcome. In the black areas, the advantage of immediate broadband rollout is cancelled by the probable substitution of a single fibre-based network for the existing competing infrastructures, in fact, presenting a situation that is moving from infrastructure to service competition. Despite lofty political statements about the significance of broadband, the more germane policy choice in favour of infrastructure-based competition takes priority.

Conceivably, sector-specific regulation could also be articulated along these geographical lines. In white areas, a fair amount of regulation is likely to be required in the long run, in order to keep in check what is in fact a network monopoly. In black areas, on the other hand, if infrastructure-based competition takes hold, sector-specific regulation can probably be reduced to the minimum. Grey areas would lie somewhere in between.

In the end, as far as the need for co-ordination among NRAs is concerned, the Commission is thus divided between those applying and monitoring sector-specific regulation, who tend to favour a high degree of consistency – close to harmonisation – between NRA decisions, and those implementing state aid policy, who have understood that it is impossible to follow the same policy throughout the EC. Even at member state level, it is doubtful whether one size fits

all. Infrastructure policy would then have to be determined on a regional or local basis. In a recent proceeding, the British OFCOM has proposed to modulate wholesale broadband access (bitstream) regulation according to the amount of competition present or expected at the local exchange level, an approach which the Commission accepted with some reservations.<sup>79</sup>

## 7.4 CONCLUSIONS

European law influences most member state decisions concerning investment in infrastructure, in one way or another. Primary law – the four freedoms and the competition rules contained in the EC Treaty – pushes member states towards lighter solutions (subsidies or regulation) – and imposes some discipline on their actions. Most importantly, in network industries, national law largely implements decisions taken at the EC level and reflected in secondary EC law (directives). The latter have been adopted mostly as part of the liberalisation processes designed to ‘trim the fat’ off incumbents by exposing them to competition and forcing them to become efficient. As the regulatory focus shifts to the promotion of investment in infrastructure, certain characteristics of the current EC regulatory framework risk being overlooked, especially the separation of regulatory and operational functions and the need to factor the costs imposed on private firms in regulatory decisions.

The electronic communications sector provides an interesting case study of the above, although it is affected by uncertainty concerning technological evolution and demand, to such an extent that it is perhaps in a category of its own among network industries.

The review of electronic communications regulation currently under way at EC level highlights the main regulatory debates surrounding investment in infrastructure. First of all, structural solutions – essentially separation of vertically-integrated companies – are put forward, but they are perhaps too drastic and they show evidence of a deep involvement of regulatory authorities with the operation of firms. Secondly, behavioural solutions raise problems of their own, both as regards timing (*ex ante* or *ex post*) and intensity (how much regulation). This essay proposes a way forward, based on legal and economic considerations, whereby regulatory authorities would set out *ex ante* a series of undesirable scenarios which would trigger intervention if they materialise. These scenarios should track competition law closely so that it does not subject investors to more risks than in other sectors. Finally, it is open to discussion how much co-ordination is needed at the EC level: while uniformity might appear desirable at first sight, there are also virtues to letting NRAs, under certain conditions, develop slightly divergent solutions so as to gain practical insights. In any event, the optimal regulatory approach is likely to vary even from one region to another within a single member state.

## NOTES

1. Professor of Competition Law and Co-Director, Tilburg Law and Economics Center (TILEC), Tilburg University, pierre.larouche@uvt.nl, www.tilburg.edu/tilec, SSRN author page: <http://ssrn.com/author=537158>. Parts of this essay was previously published in 'A view from the outside', in C. Fijnaut and A. Littler (eds.) (2006), *The regulation of Gambling: European and National Perspectives*, (Leiden and Boston: Martinus Nijhoff Publishers) and in an article co-authored by M. de Visser, 'The triangular relationship between the Commission, NRAs and national courts revised' (2006) 64 *Communications & Stratégies* 125. This essay is also based on a number of presentations made over the past year, as well as numerous conversations with colleagues at TILEC and elsewhere. Special thanks go, in alphabetical order, to Filomena Chirico, Eric van Damme and Ilse van der Haar. The helpful comments of Rudi Bekkers and other participants in the WRR project are also gratefully acknowledged.
2. In the course of the ongoing review of electronic communications regulation: see the Communication on the Review of the EU Regulatory Framework for electronic communications networks and services COM (2006) 334 final (29 June 2006) and the accompanying Commission Staff Working Document SEC (2006) 816 (28 June 2006). Concrete proposals for changes to the regulatory framework were tabled on 13 November 2007: see in particular the Proposal for a Directive amending Directives 2002/21, 2002/19 and 2002/20/EC, COM(2007)697 (containing the proposal to introduce functional separation of local networks) and the Proposal for a Regulation establishing the European Electronic Communications Market Authority, COM(2007)699.
3. Save for the powers given to the EU concerning Trans-European networks at Article 154-156 EC, which have so far failed to have a significant impact.
4. Whether created from scratch or through the nationalisation of existing firms.
5. It will be recalled that the firms themselves are and remain subject to EC competition law.
6. Monopoly rights qualify as 'exclusive rights' within the terminology of Article 86(1) EC. This provision also applies when member states confer 'special rights', i.e., restrict market access to a limited number of companies, not chosen according to open, transparent and non-discriminatory procedures.
7. See for a more recent example which summarises this line of case law, EJC, 25 October 2001, Case C-475/99, *Ambulanz Glöckner* [2001] ECR I-8089.
8. EJC, 19 May 1993, Case C-320/91, *Corbeau* [1993] ECR I-2533.
9. EJC, 23 April 1991, Case C-41/90, *Höfner* [1991] ECR I-1979.
10. The extension of the monopoly to other services could be seen as a form of tying (Article 82(d) EC), whereas the inability to satisfy demand could be seen as a limitation of production within the meaning of Article 82(b) EC.
11. Typically by allowing for cross-subsidisation among the various products or services under monopoly, as in *Corbeau*, *supra*, note 12.
12. In Article 87(3)(a) for 'areas where the standard of living is abnormally low or where there is serious underemployment' and more generally at Article 87(3)(c)

- for ‘aid intended to further the economic development of areas of a member state which are disadvantaged in relation to the national average’ (as interpreted by the EJC). See Regulation 1628/2006 of 24 October 2006 (Block Exemption Regulation for regional aid) [2006] OJ L 302/29 and the Guidelines on national regional aid for 2007-2013 [2006] OJ C 54/13.
- 13 See *infra* under 3.3.4.
- 14 EJC, 24 July 2003, Case C-280/00, *Altmark* [2003] ECR I-7747.
- 15 It is worth emphasising that, despite all Commission statements implying the contrary, *Altmark* is not concerned with Services of General Economic Interest (SGEIs) within the meaning of Article 86(2) EC. *Altmark* deals with the definition of State aid at Article 87(1) EC, and the EJC ruled in terms of ‘public service obligations’, which are presumably left at the discretion of member states.
- 16 At the same time, if a regulatory regime is designed from scratch, it does not seem overly difficult to implement the *Altmark* conditions from the start. Problems arise mostly with existing regimes.
- 17 This concept is also present in EC competition law. Its recent evolution was characterised at a symposium ‘*De EU: de interstatelijkheid voorbij?*’ (Amsterdam, 14 November 2005), proceedings to be published.
- 18 This is the famous ‘*rule of reason*’ approach launched with EJC, 20 February 1979, Case 120/78, *Rewe v. Bundesmonopolverwaltung für Branntwein* [1979] ECR 649 (‘*Cassis de Dijon*’) for the free movement of goods, and later on extended to the other freedoms as well: for services and establishment, see *Gebhard, supra*, note 6.
- 19 For a nice example of how the application of EC law translates into such requirements, see the line of case law beginning with *Telaustria*, whereby the EJC derived from Article 43 and 49 EC a principle of ‘transparency’ to be applied to public work contracts and concessions which fall outside the scope of secondary EC legislation on public procurement: EJC, 7 December 2000, Case C-324/98, *Telaustria* [2000] ECR I-10745; 21 July 2005, Case C-231/03, *Coname*, not yet reported; 13 October 2005, Case C-458/03, *Parking Brixen GmbH*, not yet reported and 6 April 2006, Case C-410/04, *ANAV*, not yet reported.
- 20 EC law already contains a general principle of non-discrimination based on nationality (Art. 12 EC), to which further grounds have been added at Art. 13 EC with the Treaty of Amsterdam. We are here dealing with another dimension of the non-discrimination principle which is peculiar to economic regulation, namely non-discrimination amongst competing economic operators or amongst their actual or potential customers.
- 21 Now set out at Art. 13 of Directive 2002/21 (Framework Directive on electronic communications) [2002] OJ L 108/33).
- 22 Particularly from engineering and technological disciplines.
- 23 *Supra*, note 1.
- 24 Save perhaps for the central issue of which services are to be included in the universal service basket defined at EC level: see Article 15 of the Universal Service Directive (Directive 2002/22).
- 25 See Ilse van der Haar, TILEC WP on technological neutrality.
- 26 A weaker interpretation that would also support the reasoning set out in the

main text centres on sustainability: lawmaking and regulation should be so designed that they can withstand technological evolution and do not require updating (or perhaps better, upgrading) every year.

27 See EJC, 13 March 2001, Case C-379/98, *PreussenElektra* [2001] ECR I-2099.

28 This does not imply that incumbents and newcomers are in the same position as regards these investments. Incumbents typically have deeper pockets.

29 Granting monopoly rights over a reserved sector, with the possibility of cross-subsidies within that reserved sector, is an alternative compensation method. It does not involve disbursement of public funds, but it is very approximate when compared to public funding along the lines of *Altmark* or the Universal Service Directive, discussed below. In any event, it is by definition not compatible with a liberalised environment.

30 Universal Service Directive, Art. 12-14.

31 Even in the more forward-looking markets, such as broadband access provision, incumbents serve less than 50% of end-users (EC-wide average, the actual figures vary significantly from one member state to the other).

32 By paradigm, I mean the higher rationale which stands above the listed regulatory objectives, such as the internal market, undistorted competition or consumer/citizen rights, as they are listed in Article 8 of the Framework Directive (Directive 2002/21). After all, these objectives are not specific to electronic communications regulation, and the existence of sector-specific regulation over and above general instruments which are already meant to pursue these objectives must be explained. Until now, that paradigm has been the introduction of competition as a way to increase the efficiency of the sector. My contention is that it will be displaced by the fostering of investment and innovation.

33 The manifestations of convergence now taking place can be briefly sketched as follows. First of all, dedicated fixed voice networks (PSTN) are being folded into all-IP networks (Often referred to as Next Generation Networks (NGNs), following the name given to the regulatory proceeding in the UK in which this change was investigated), for instance, in the UK and in the Netherlands. In this manner, a single IP network will carry voice, data and video traffic. Similarly, the next-generation mobile networks (3G, with 4G now in development) also carry voice and data together. This makes it possible to bring new offerings to the market, for instance so-called triple-play packages – where one provider offers voice, data and TV from one single network. As a further step, convergence between fixed and mobile enables ‘quadruple-play’ offers (triple-play and mobile communications) to come to the market.

34 As will be discussed below, even the current definition of ‘electronic communications’, which stops at the boundary of content, is probably too narrow.

35 There is already enough bandwidth for voice and most data applications. The transmission of video signals is especially demanding, however, despite the progress that has been made in compression techniques, which allow a more efficient use of existing bandwidth. At the same time, it is risky to make bold predictions about bandwidth requirements, since new applications are constantly emerging in an unpredictable fashion (see Joost or wait until Twitter starts to include live video as opposed to SMSs and e-mails).

- 36 These solutions have the digitalisation of the local loop in common or Digital Subscriber Loop or DSL, which creates extra capacity for data transmission. The most widespread is Asymmetric DSL (ADSL), but its more advanced versions such as SDSL and VDSL are now being introduced. DSL solutions share one characteristic: as the capacity increases, so must the distance between the multiplexer and the subscriber (i.e., the length of the copper loop over which the DSL solution is deployed) decreases. The evolution of DSL is thus coupled with the increasing penetration of fibre deep in the local network. These fibre configurations are termed FTTX, with the 'x' standing for the level of penetration, ranging from FTTN (local node), through FTTC (curb) and FTTB (building, for apartment buildings) to FTTH (home).
- 37 Similarly, cable TV networks have been connected to fibre backbones in HFC (hybrid fibre-coax) architectures.
- 38 Because of the uncertainty surrounding technological evolution and demand (see below), the timetable is difficult to predict. It was already at the beginning of the 1990s that the deployment of full-fibre networks was being advocated. With the benefit of hindsight, that would have been a major mistake to sink fibre in the local networks then – at great cost to the firms and by the same token at great social cost – given that xDSL technologies have allowed copper loops to remain useable until now. Accordingly, it is impossible to fix a cut-off date in the future as of which full-fibre networks will be indispensable.
- 39 See the Commission decisions concerning the UK and Germany: Decision 2003/570 of 30 April 2003, *UK Network Sharing Agreement* [2003] OJ L 200/59 and Decision 2004/207 of 16 July 2003, *Network Sharing Rahmenvvertrag* [2004] OJ L 75/32.
- 40 A sense of community or belonging.
- 41 Witness the golden age of ISDN as a beefed-up Internet access technology in the 1990s and the prevalence of SMSs today: neither of these two technologies were designed for the respective uses for which they became famous. Good marketing and network effects did the trick. Another prime example, outside of the realm of electronic communications, is the iPod: technology-wise, there was nothing innovative about this product (MP3 players were already on the market), but design and marketing savvy turned it into a milestone.
42. It is recalled that the deployment of GSM networks in the 1990s were not considered to be such a major success (or a profitable business) until pre-paid subscriptions were introduced. This enabled the penetration rate to surge to 90% and beyond (even above 100% of the population in certain countries!) and mobile telephony (GSM) to become more or less a social requirement.
- 43 For instance, watching video on mobile telephones, which is not possible at 2G data speeds.
- 44 As was elaborated in an industry presentation, consumers are buying the nice 3G phones, but keeping the 3G features switched off.
- 45 It could be a chicken-and-egg problem, in that the requisite amount of technical proficiency and patience with the constraints imposed by limited bandwidth limits the take-up of such services to the more dedicated users. It could also be a generational issue, with the penetration rate then increasing in step with the

- proportion of the general population who grew up with the Internet (i.e., born after 1980).
- 46 Alternatively, if it is thought that a single solution should be adopted *beforehand*, market players (equipment and software manufacturers, operators, providers) might fight a standards battle behind the scenes before a technological advance is brought to the market. Witness the high-stake game that surrounded the specification of the 3G standard.
- 47 At the same time, in electronic communications, demand for networks is not always necessarily derived from demand for services. The interplay is more complex. The supply of networks is rather lumpy, given the need for large-scale rollouts, whereas the demand curve for electronic communications services seems to be more continuous. So while demand for services definitely influences network rollout (as of a certain level of pent-up demand, it is worth investing in network capacity), a large-scale rollout will typically anticipate on demand. The extra capacity might then trigger a quicker rise in demand for services, along the lines of the famous saying ‘build it and they will come’.
- 48 Supra, note 1.
- 49 See in the Framework Directive for the definitions of ‘electronic communications networks’, ‘electronic communications services’, ‘associated facilities’, etc.
- 50 For instance, the SMP decisions are never made in a complete vacuum. There is historical experience with the various markets, the players on these markets and their behaviour.
- 51 Even in the ‘purest’ *ex post* competition law case, where a firm is under scrutiny for past behaviour with documented effects on a well-known relevant market, will involve some *ex ante* aspects in the remedies, which are meant to prevent future recurrences of anti-competitive behaviour (unless only a fine is levied).
- 52 As far as competition law is concerned, MCR decisions are by nature *ex ante*, and a number of decisions under Article 81 and 82 EC (especially where interim relief is involved) actually fall between *ex ante* and *ex post*, in that the market is known, the allegedly anti-competitive behaviour is known, but its actual effects on competition are not fully known, since the intervention aims to prevent these effects from occurring.
- 53 London Economics (2006), *An assessment of the regulatory framework for electronic communications: growth and investment in the EU e-Communications sector*, available at [http://ec.europa.eu/information\\_society/policy/ecommm/info\\_centre/documentation/](http://ec.europa.eu/information_society/policy/ecommm/info_centre/documentation/).
- 54 *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko*, 540 US 682 (2004).
- 55 *Silver v. New York Stock Exchange*, 373 US 341, 358 (1963), cited in *Trinko*, *ibid*.
- 56 See the summary of the proceedings in P. Larouche, ‘Contrasting legal solutions and the comparability of US and EU experiences’, in F. Levêque and H. Shelanski, eds. (2007), *Antitrust and Regulation in the EU and US: Legal and Economic Perspectives* Cheltenham: Edward Elgar.
- 57 Decision 2003/707 of 21 May 2003, *Deutsche Telekom AG* [2003] OJ L 263/9 [hereinafter *DT*]. This decision is before the Court of First Instance of the European Communities for review.

- 58 See Larouche, *supra*, note 55. D. Geradin, ‘Limiting the scope of Article 82 EC: What can the EU learn from the US Supreme Court’s judgment in *Trinko* in the wake of *Microsoft*, *IMS*, and *Deutsche Telekom*?’ (2004) 41 CMLRev 1519 would explain the contrast between the two rulings differently.
- 59 The Commission has taken a very hard stance on the German legislative proposal to grant regulatory holidays to Deutsche Telekom, opening a fast-track infringement proceeding against Germany. According to the press releases, the Commission sees two infringements of EC law. Firstly, the German law would breach the objectives of the electronic communications framework, in effectively weeding out competition on the higher-speed broadband market (VDSL). Secondly and perhaps more importantly, such a legislative action would run counter to the scheme of electronic communications regulation, whereby these types of decisions belong to the NRA and not to the executive or the legislature, and must be taken only after the notification and comment procedures of the Framework Directive have been complied with. See ‘Commission launches ‘fast track’ infringement proceedings against Germany for “regulatory holidays” for Deutsche Telekom’, Press Release IP/07/237 (26 February 2007) and ‘Telecoms: Commission takes next step in infringement proceedings because of Germany’s ‘regulatory holiday’ law’ Press Release IP/07/595 (3 May 2007).
- 60 This has repercussions in tort law, for instance, where damage representing no more than the realisation of this *allgemeines Lebensrisiko* (as opposed to damage emanating from a specific risk for which the defendant is accountable) is not recoverable.
- 61 A number of Commission officials, from the Commissioner on down, have claimed recently that after more than forty years of experience in its application, EC competition law has become predictable. This was a key argument for the modernisation – read decentralisation – of competition law enforcement as well as for the alignment of electronic communications regulation with competition law. With all due respect, a fair measure of scepticism is warranted against such a claim.
- 62 This is yet another reason – at a more theoretical level – why competition law should not be covered by any regulatory holiday.
- 63 All the more now that Regulation 1/2003 has expanded the remedial powers of the competition authorities – or confirmed their breadth, according to some.
- 64 This does not imply that the course of action ultimately chosen by the Commission – the introduction of an EC-level regulation on roaming outside of the regulatory framework for electronic communications – was appropriate. In fact, one could argue that the Commission indulged in regulatory opportunism there, given that it was meant to be committed to the Framework Directive and the market analysis of its SMP procedure for the imposition of these types of obligations.
- 65 To some extent, one could argue that the NRAs had co-ordinated in the case of roaming, since none acted. However, it seems also that the NRAs could have been captured by the firms in their respective jurisdictions.
- 66 Including the list of policy objectives at Article 8 of Directive 2002/21, the latitude left to the NRAs in the choice of remedies and their powers concerning scarce resources.

- 67 E.g., whether cable and DSL are on the same market for broadband access (Market 12) and transmission of broadcasting signals (Market 18).
- 68 E.g., the presence of collective dominance for mobile call origination (Market 15) or the impact of countervailing buyer power on the SMP findings for smaller providers of call termination (Markets 9 and 16).
- 69 Commission Guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services [2002] OJ C165/6.
- 70 Commission Recommendation 2003/311 of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (Recommendation on relevant markets) [2003] OJ L 114/45.
- 71 See P. Larouche 'Co-ordination of European and Member State Regulatory Policy – Horizontal, Vertical and Transversal Aspects' in D. Geradin and N. Petit (eds.) (2005) *Which Regulatory Authorities in Europe?* Cheltenham: Edward Elgar.
- 72 See in particular Recitals 27-28.
- 73 This view has been prominent in recent speeches of Commissioner Reding, where she praises the review procedure of Article 7 of the Framework Directive as enabling 'two pairs of eyes' to bear upon every case. On the other hand, the Order of the President of the Court of First Instance dismissing the application of Vodafone against a letter of comments (without veto) made by the Commission pursuant to Article 7 of the Framework Directive would seem to ascribe a more limited role to the Article 7 review: CFI, 12 December 2007, Case T-109/06, *Vodafone España v. Commission*, not yet reported.
- 74 Consolidating the internal market for electronic communications, COM(2006)28 (6 February 2006) at 6, 9.
- 75 *Supra*, note 1 at 4, 8-9.
- 76 The Commission decision vetoing the draft measure of the German NRA illustrates well the difference between the standard outlined above and a 'consistency/coherency' standard: Decision of 17 May 2005, Case DE/2005/144, available at [www.forum.europa.eu.int](http://www.forum.europa.eu.int). The Commission vetoed the draft measure because it departed from what other NRAs had done, without however explaining how that measure would have hampered the internal market or significantly clashed with Community law.
- 77 L. Papadias, A. Riedl and J.G. Westerhof, 'Public funding for broadband networks – recent developments' [2006] 3 *Competition Policy Newsletter* 13.
- 78 Decision 2007/175 of 19 July 2006, *Broadband infrastructure in Appingedam* [2007] OJ L 86/1.
- 79 Letter of 14 February 2008, Case UK/2007/0733, Wholesale Broadband Access in the UK, SG-Greffe (2008) D/200640, available at <http://circa.europa.eu/>.

## 8 PRIVATE EQUITY FUNDS AND PUBLIC UTILITIES: WHERE INCENTIVE STRUCTURES COLLIDE<sup>1</sup>

*William H. Melody<sup>2</sup>*

### 8.1 INTRODUCTION

As private equity funds (Funds) are now investing in firms of varying size in an increasing variety of industries, it is difficult to develop a general analysis about their impact upon industry development and the efficient allocation of resources in the economy. There is a general concern about the implications for investors in this new financial market where individuals, pension funds and others invest in the funds. This raises traditional financial market governance issues in a new setting, including the nature of the principal-agent relation between investors and Fund managers, market transparency on Fund activities and performance, investor understanding of the risks they are assuming, and the implications for taxation.

Equally important is the impact of the Funds upon the firms and industries in which they invest. They are not passive investors, but rather justify their existence by making fundamental changes to the management and operations of the firms in which they invest. By eliminating the principal-agent problem between diversified public share owners and company managers that characterises many public equity companies, the Funds force attention toward the maximising of investor value by selling and restructuring assets and operations, and then selling on the residual firm. Their returns, and the returns to their shareholders, must come from the increases in investor value they create. By this standard, the Funds claim that the high returns they have earned justify their activities as both profitable and efficient for the economy.

However, this is an insufficient standard because it does not address the source of the increased investor value, or even consider the efficiency of the reallocation of resources that the Funds create by their interventions. Cashing out a firm's assets may simply be trading off long-term profitable growth for short-term cash, increasing short-term investor value at the expense of long-term investor value. As Funds typically do not invest for the long-term, but rather plan to have sold off the target firms within about five years, there is clearly a biased incentive to maximise short-term investor value at the expense of long-term value. The high returns being realised may simply be a reflection of the differential between short-term and long-term investor value. Moreover, the threat of Fund takeovers is likely to reduce the long-term investment value in target companies, increasing the risk and reducing the incentive for making long-term investments.

The most common method of financing Fund investments in target firms is the leveraged buyout (LBO) where the Fund acquires large amounts of debt capital, secured by the assets of the target firm, which is used to purchase the stock from

public shareholders. A common arrangement is about 80% debt and 20% equity supplied by the Fund and its investors. After the takeover, the capital structure of the target firm is increased dramatically to something usually higher than 80%. This LBO financing raises another conflict between short-term and long-term investor value and risk. For many target firms, a debt ratio higher than 80% may create maximum investor value in the short-term, especially if interest rates are low. But this is unsustainable in the long-term as the firm must remain preoccupied with managing its cash flow to meet its debt requirements, is subject to very high financial risk, and is incapable of attracting long-term investment capital.

Thus, in sectors of the economy that require long-term investments, there are strong reasons to suggest that the returns to Fund take-overs of firms, especially if financed by LBOs, will be, at least in part if not in whole, simply trading off long-term value for short-term value, with negative consequences for industry development and efficient resource allocation. Recently the Funds have entered some traditional public utility industries that provide basic infrastructure services for the economy, in particular airports and telecommunication (telecom). Press reports indicate infrastructure operators in Europe will be high priority targets over the next few years. This chapter examines the likely implications of Fund take-overs of public utilities, and the limited experience that incumbent national telecom operators have with take-overs.

## 8.2 DISTINCTIVE CHARACTERISTICS OF PUBLIC UTILITIES<sup>3</sup>

The public utility industries provide the basic infrastructure for the economy and a variety of social services, and traditionally include airports, ports, telecom, electricity, gas, water and various forms of public transport. They differ from general industry in several important ways:

- the largest “incumbent” firms in the public utility sectors in any country typically have significant monopoly power in their respective sectors over the provision of essential public services;
- they carry important public service responsibilities (e.g., universal service obligations);
- they are very capital-intensive requiring significant and continuing long-term investments in physical infrastructure assets, their maintenance and expansion;
- they make extensive use of public rights-of-way and other public resources that require special grants from the state. In most cases these have been granted at minimal or no cost, not market value;
- they are subject to special government oversight with respect to their delivery of public services, often by industry-specific regulatory authorities.

Historically in Europe these public utility operations have been owned by governments and provided as public services. During the last ten to fifteen years, many have been privatized in part or in whole with a view to stimulating a degree of competition in some national utility markets and facilitating the development

of European common markets in these industries. These public utility industries are still at an early stage in the transformation process from government public service monopolies to private competitive markets, so the services markets are still highly monopolised. Industry specific regulation has been established to ensure the monopoly power is not exploited and public services objectives and standards are maintained.

### 8.3 THE FUNDS' ATTRACTION TO PUBLIC UTILITIES<sup>4</sup>

The transitional position of many public utility operators between public sector and private market operation makes many of them attractive to Funds looking for investment opportunities in highly imperfect markets, especially if the utility operator is fully privatized and the management is receptive to a co-operative leverage buyout. The special considerations associated with the use of public resources such as rights-of-way, special rights such as the power of eminent domain, and special obligations such as the provision of universal service raise a risk of possible political intervention, especially with respect to hostile take-overs.

The distinctive characteristics of public utility operators that Funds find particularly attractive are the following:

- large, stable cash flows from a customer base that considers the service a necessity and has few, and sometimes no alternatives;
- a significant degree of monopoly power in the primary market(s);
- public utilities do not maximise short-run profits because primary consideration in decision making is given to long-term investment needs, stable financial structures and public service responsibilities;
- financial structures and policies are geared to risk optimisation for long-term investments in capital intensive fixed assets; the large cash flows provide internally generated capital necessary to meet significant ongoing long-term investment requirements in infrastructure facilities;
- public utilities own significant public resources and special rights (e.g., land, rights-of-way, eminent domain, radio spectrum, etc.) that are undervalued, or even unvalued assets;
- public utilities are typically characterised by conservative management, often carried over from the prior government service model, and management policies and practices of often untested by competitive markets and of varying efficiency;
- public stockholders who are attracted to public utility providers have been investors looking for a stable long-term return with regular dividends and reduced market risk. Stock prices will reflect this.
- industry specific governance/regulation is limited typically to certain service performance objectives in basic services and does not extend to ownership, financial policies, pricing for most services, or profit control.

The attractiveness of each of these individual characteristics of public utilities will vary depending on individual circumstances, but collectively they demon-

strate that public utility operators are likely to become more significant targets in the future as the privatisation of publicly owned infrastructure continues and the scrutiny of infrastructure operators by the Funds deepens. For the Funds, the market risks of public utility operator take-overs are relatively small and the possibilities for enormous financial gains are great. Most utility managers are likely to be receptive to bids given their custodial management style, the diversity and relative passivity of the public stock ownership, and the possibilities for large personal gains for the management. A more serious risk is whether the Funds are likely to provoke political responses to their plans from concerns about the implications for the long-term development of public utility services.

#### **8.4 CONFLICT BETWEEN LONG-TERM AND SHORT-TERM INVESTOR VALUE**

The effects of Fund buyouts and restructuring of public utility operators are magnified because of the unique characteristics of infrastructure provision noted above. The most significant impact is on the capability for efficiently financing utility operator long-term investment programs. This is where the short-term priorities of the Funds and the long-term priorities of public utilities conflict directly. After the acquisition, the new owners have a powerful incentive to pay to themselves the major portion of the large internally generated cash flow that would have been reinvested in infrastructure expansion.

In addition, the utilities inherit the large debt borrowed by the Funds to buy them. This dramatically increases the firm's debt/equity ratio and its annual interest obligations. It suffers a major decline in its credit ratings and the interest rates it must pay on its debt. Internally generated capital for reinvestment is dramatically reduced, as is the firm's capability to borrow investment funds, even at higher interest costs. The utilities are no longer well positioned for making efficient long-term investments. This requires significant reductions in their investment programs and/or increases in prices for consumers of their monopoly services.

Other areas where this conflict between the short-term priorities of the Funds and the long-term development priorities of the utilities include:

- research and development, a long-term priority where utilities traditionally have maintained activities, and the Funds typically have had no interest;
- quality of service where the utilities traditionally have targeted a higher quality reflecting public interest considerations and the Funds interest in reducing quality to a level consistent with maximising short-term profits;
- fulfilment of public service responsibilities, such as universal service, where the Funds are likely to maximise their discretion to minimise expenditure;
- staffing and training where the short-term requirements of the Funds require significantly fewer resources than traditional utility operators long-term development programs;

- services pricing strategy, where the long-term market and services development associated with long-term investment strategy of utilities conflicts with the short-term pricing and cash generating strategy of the Funds.

Recognising that infrastructure provision in public utilities in Europe could benefit from improvements in managerial and operational efficiency, as they still operate in markets where the degree of competition they face is relatively weak, one might expect that Fund take-overs could provide some unambiguous efficiency improvements. However, these same utilities need increased long-term investment to improve their infrastructure facility networks. The distinctive characteristics and circumstances of public utilities in Europe suggest that the overall effects of Fund take-overs are likely to be highly negative with respect to both infrastructure development and the longstanding public policy objectives for public utilities. Short-term investor value maximisation will prevent efficient long-term sector development.

## 8.5 BROADER ECONOMIC AND SOCIAL IMPLICATIONS

Public utilities provide the important infrastructure foundations for all economies and societies. The efficiency of the entire economy and its social relations is heavily influenced by the efficiency, quality and universality of utility services. They are priority factors in the locational decisions for investment by firms in many industries. They are standard economic indicators of the differences between developed and developing countries. The effects of the efficiency and universality of a country's infrastructure services ripple throughout the economy and society in a manner that multiplies their impact many times. Because of their centrality to all economic and social life, utility services have always been treated differently than industry in general. Public policy has been directed to ensuring to the greatest extent possible the universal availability of utility services at a reasonable quality and price.

As the government ownership and provision of public utilities has begun to be privatized as a part of market liberalisation policies in recent years, governments have done so by selling ownership shares to the public that are then traded on public stock exchanges. The utilities have retained their public interest obligations for long-term infrastructure development and their public service obligations. The entry of Funds into the utility industries raises serious new issues in relation to investments in incumbent operators that hold strategic market positions with significant monopoly power and public service responsibilities. Following their traditional practices and financial incentives to maximise short-term cash returns, the Funds can be expected to leave the utilities in a condition where the utilities' capabilities for pursuing their long-term objectives have been severely jeopardised. One can expect investments in long-term infrastructure development to be significantly reduced not only during the period of Fund ownership, but also for a significant period afterward because of the debt mountain created, and the

highly restricted possibilities for, and costs of, renewing long-term investment programs.

After the Funds sell off the utilities, special investments in long-term staff development, research and development, upgrading quality of service and restoring public service obligations are all likely to be necessary to get the infrastructure operations back to a level of preparedness for the continuation of long-term investment in infrastructure development. Utilities may have to seek higher prices from consumers to help finance the preparation for the implementation of renewed long-term development strategies.

For public utilities, the entry of Funds is unlikely to bring strategies for long-term investment in infrastructure development. Rather they are likely to bring strategies for disinvestment by massive cash payouts as long-term investor value is converted into short-term value. This, in turn, can be expected to have significant negative multiplier effects on the growth of utility industries, and eventually on economic growth for the economies dependent on the continued development of public utility services.

## **8.6 PUBLIC UTILITY CASE STUDY: TELECOMMUNICATIONS**

### **8.6.1 TELECOM REFORM AND EU INFORMATION SOCIETY OBJECTIVES**

The telecommunications (telecom) sector has been the leading public utility sector in Europe with respect to privatisation of incumbent national operators. Most of the EU 15 countries have privatized their national operators in whole or in part and their shares are traded on public stock exchanges. The new EU member countries are at various stages of planning and implementing privatisation policies. The telecom sector is where there is the most actual experience with privatisation and where a few Fund take-overs have taken place.

Telecom is also important because the sector is growing rapidly as a result of the convergence of computing and information technologies with telecom infrastructure technologies and services. Long-term investments in new upgraded broadband telecom networks are now underway in order to provide the essential infrastructure for next-generation Internet and electronic commerce services that will underpin Europe's future digital economy and information society.

The importance of Europe's transition to an information society is documented in the EU's – *Lisbon Agenda 2010 Information Society initiative* launched in June 2006, which is a renewed commitment to the Lisbon reform agenda. It seeks to promote an open and competitive digital economy as well as an integrated approach to information society and media policies in the EU. This requires upgraded telecom networks across Europe that can provide the broadband capacity needed for information societies. There are three main priorities for Europe's information society and media policies:

- 1 *the completion of a single European information space which promotes an open and competitive internal market for information society and media services;*
- 2 *strengthening innovation and investment in ICT research to promote growth and more and better jobs;*
- 3 *achieving an inclusive European information society that promotes growth and jobs in a manner that is consistent with sustainable development and that prioritises better public services and quality of life.*<sup>5</sup>

It is difficult to see how Fund ownership of telecom infrastructure operators will promote these objectives, and experience suggests that in many cases the Funds would be acting contrary to these objectives.

### 8.6.2 FINANCIAL STABILITY IN THE TELECOM SECTOR IN EUROPE

Issues regarding the financial stability of Europe's largest telecom operators have arisen in recent years, affecting their capabilities to invest in long-term network development. In 1999, at the height of the dotcom stock market boom, British Telecom, France Telecom, Deutsch Telecom, KPN Netherlands and others all bid extraordinary sums for a limited supply of national third-generation (3G) mobile spectrum licenses. This raised their debt ratios and interest obligations to such a high level that management called them debt mountains. These incumbent operators then had to scale back their investment programs in 3G network development in major ways, significantly slowing down economic growth in both the telecom services and equipment manufacturing sectors, and delaying the introduction of new 3G mobile services for several years, until these major European incumbent telecom operators were able to reduce their debt mountains to levels that would support sustained long-term development. During this period, Europe lost its global leadership in mobile telecom development to Asia, where operator investment plans were not constrained by debt mountains. As a result, investment in new European broadband telecom networks to provide enhanced Internet services for the future information economy, which was anticipated in the Lisbon Agenda targets for economic growth, has been slower than expected.

There are three countries with experience in Fund take-overs of incumbent telecom operators. Ireland historically has had a relatively inefficient telecom infrastructure under government ownership and was hoping that privatisation would stimulate significant improvement. Denmark has always had one of the leading telecom infrastructures in Europe. As a developing country, Bulgaria's telecom infrastructure needs a major investment program in network development over an extended period to bring it up to date and provide universal service.

### 8.6.3 EIRCOM IN IRELAND<sup>6</sup>

EIRCOM is the former national operator in Ireland. It is the principal provider of fixed-line telecom services in Ireland with approximately 2.2 million fixed lines,

and is the designated universal service provider. The chronology of key events relating to changes in ownership is as follows:

- Government offered shares on the public stock market;
- 2001 (November) Private Equity Fund purchase by Valentia Consortium;
- 2003 Refinancing of Valentia debt;
- 2004 Dividend paid to Valentia of € 400 million;
- 2004 A second public share offering was made;
- 2006 EIRCOM acquired by Private Equity firm Babcock and Brown.

When EIRCOM was privatized by the government in 1998, it was relatively inefficient compared to incumbent operators in leading countries in Europe, and it needed significant investment. The shares were purchased by a broad cross-section of Irish citizens. The Valentia private equity consortium acquisition in late 2001 was mostly debt financed. After the acquisition, EIRCOM repaid Valentia debt by issuing bonds which increased debt from about 25% to 70% of its capital structure.

Under Fund ownership, EIRCOM capital expenditures declined from € 700 million per annum in 2001 to 300 million in 2002 and 200 million in 2003 and 2004. In 2001, before the takeover, EIRCOM invested its internally generated capital from depreciation allowances plus another € 275 million. Between 2002 and 2004, it reduced its investments dramatically. Investments were more than € 450 million less than its internally generated capital from depreciation allowances. This enabled payment of a special € 400 million cash dividend to Valentia.

The second public stock offering was successfully floated in 2004 at a significant profit. During the 2004-2006 period of publicly held stock ownership, the 70% debt ratio was maintained. Capital expenditure stayed low at € 200 million in 2004 and 2005 and increased only slightly to € 250 million in 2006. In all of these years, capital expenditures remained less than internal capital generated from depreciation allowances.

In 2006, Private Equity firm Babcock and Brown from Australia purchased EIRCOM, again through debt finance. Through a complex holding company structure, ultimate ownership was traced to the Cayman Islands. Since this takeover, EIRCOM's debt has risen to € 3.8 billion supported by assets of € 3.1 billion, providing a debt/assets ratio of 117%. Although the new owners have announced their intention to invest in upgrading the EIRCOM network to European broadband standards, EIRCOM's capacity to invest significant amounts seems virtually straight-jacketed. The new owners have begun exploring the possibility that the government will provide funds to support universal service investments, and they have indicated that price increases for basic services will soon be necessary.

According to recent statistics on Broadband Penetration per Capita in EU countries, in Q1 of 2006, Denmark ranked first at 29.3%. The EU average is 14.1%.

Ireland ranks 17<sup>th</sup>, between Slovenia and Lithuania.<sup>7</sup> Thus, Ireland remains a contradiction in information society development. It is the “Information Technology Celtic Tiger” for its leadership on the computing side of information/communication convergence. But it is having enormous difficulty establishing the telecom infrastructure needed to realize the benefits throughout Irish society. Under the present ownership and financing structure, it is difficult to see how the situation will likely improve significantly for either EIRCOM or Ireland in the foreseeable future.

#### 8.6.4 TDC IN DENMARK<sup>8</sup>

TDC is the former national operator in Denmark. TDC was partly privatised in 1994 and fully privatised in 1998. In contrast to Ireland, Denmark has always been a European leader in the provision of efficient telecom services over a technologically up-to-date network with universal service coverage. TDC’s corporate vision is “to be the best provider of communication solutions in Europe.” As well as continuing to dominate the Danish market, where it owns both the major telecom and cable TV transmission and distribution networks, the company has also expanded its portfolio to include significant holdings in nine other European countries, as well as Oman. In 2005, TDC purchased additional operations in Hungary, Sweden and Switzerland. Moreover, it is the co-owner of several international partnerships covering services in other countries. Revenue in 2005 stood at € 6.245 billion while net income was just under € 1 billion [depends on whether it is US or European billion]. International operations contributed nearly half of the TDC revenues. Capital expenditures were about € 800 million. The 2005 Annual Report noted that the company expects “to be able to deliver excellent financial performance and solid cash flows in future.”

TDC stock was widely held by institutions and retail investors in Denmark, Europe and North America. It has paid a regular quarterly dividend since privatisation. In 2003, the company provided special incentives for employees to purchase shares. In recent years, TDC has been able to fund its growth and new acquisitions primarily with internally generated cash as well as steadily reduce its debt. Since 2001, its net interest-bearing debt has been cut in half, declining from 38% to 18% of total assets, and from 50% to 27% of debt plus equity.

The Fund offer was announced on 2 December, 2005, supported by the TDC Board, and completed on 1 February 2006 with the purchase of 88.2% of equity shares. TDC was taken over by a group of five foreign private equity firm specialists – Apax Partners; Blackstone Group; Kohlberg Kravis Roberts; Permira and Providence Equity – in the largest takeover in Europe to that date for just under € 12 billion. It was financed by slightly more than 80% debt.

The 2005 Annual Report notes significant TDC credit rating downgradings by the Standard and Poor’s and Moody’s Investors Service as a result of the leverage buyout. The acquisition increased TDC’s net debt to total assets ratio from 18% to

more than 90% at interest rates substantially higher than those for the previously established debt. The new owners have been deliberately vague about why they took over TDC and what their plans are, stating only that they expect to own TDC for about five years.

On 5 April 2006, two months after the takeover, TDC declared a special dividend of DK 219.50 per share. The total payout was DK 43.481 million (€ 5.9 billion), more than 57% of the share price paid by the new owners, about 47% of TDC total assets, and about twice the equity investment of the takeover partners. It was funded by TDC sales of some of its investments in other countries, additional debt, and the cash reserve TDC had built up in prior years, presumably in anticipation of making long-term investments.

The evidence to date suggests that the TDC takeover has had little or nothing to do with improving the efficiency of TDC. The immediate cash payout of almost half of TDC's assets suggests a pretty clear case of asset stripping. This is short-term disinvestment, not long-term investment.

#### **8.6.5 BULGARIAN TELECOMMUNICATIONS COMPANY**

Established in 1992, the Bulgarian Telecommunications Company (BTC) is the former national operator in Bulgaria. The company provides 97% of fixed-line services in the country as well as holding a substantial interest in the mobile market. BTC is responsible for the provision of universal service. By international standards, however, BTC is not efficient, the telecom network is not up-to-date technologically and network coverage is far from universal. Bulgaria is in urgent need of substantial long-term investments to modernise the network.

Following a lengthy two-year privatisation process, Advent International agreed the purchase, through the Austrian operation, Viva Ventures, of a 65% stake in BTC in June 2004 for € 230 million plus an € 50 million capital increase. In January 2005, the Bulgarian state initiated an IPO for 34.78% of BTC's capital at the Bulgarian Stock Exchange. Current minority shareholders are Barclays (10%), Telecom Invest Holding (8%) and Bulbrokers (5%), leaving less than 12% in the hands of the general public. In 2004, the owners took dividends of € 75 million. As of this writing, Advent International is engaged in negotiations to sell its holdings in Viva Ventures. It is expected that the new owner(s) will attempt to take private ownership and de-list the company.

In March 2005, BTC refinanced its debt to the European Bank for Reconstruction and Development (EBRD) by drawing a € 285 million loan. BTC planned to use part of the loan to finance its capital expenses and invest in a network digitalisation and modernisation program. However, in terms of actual network investment, the digitalisation and modernisation activities undertaken since privatisation have been minimal.

During this period, BTC employee numbers were reduced from 24,000 to less than 10,000 under conditions seen as secretive and arbitrary by the employees, and in violation of the BTC privatisation agreement. After local unions filed complaints with the Bulgarian government about BTC's failure to live up to its commitments in the Bulgarian Labour Code and European directives on information and consultation (98/59/EC and 2002/14/EC), a social partnership agreement was finally agreed upon with the company in July 2006.

The evidence suggests that Advent International, the Fund purchasing the initial 65% of BTC shares had no evident interest in investment in long-term network development, but only in a short-term gain from cash dividends and flipping its investments. With the current ownership arrangements, BTC will be unable to invest all the more recent EBRD loan funds in network development because of the cash payout requirements from the Fund owners. It is not expected that BTC will be able to build a modern telecom network for Bulgaria in the near future.

#### 8.6.6 CONCLUSIONS FROM THE CASE STUDIES

The three telecom-sector country case studies of Fund investments in incumbent infrastructure providers in Europe suggest the following:

- Fund investments can be attracted to incumbent telecom operators that are efficient (Denmark), inefficient (Ireland), and still in need of fundamental reform and network development (Bulgaria);
- Fund ownership is unlikely to foster, a demonstrable efficiency improvement of a relatively inefficient operator (Ireland), the network modernisation and expansion needed in a developing country (Bulgaria), or the maintenance of the leadership of one of Europe's more efficient operators (Denmark);
- long-term investment in network development is not an evident priority of the Fund owners in any of the countries. Short-term gains from cash payouts, disinvestment and resale of the operator are the priorities;
- the levels of debt forced upon the operators after the leveraged buyouts severely constrained long-term investment capabilities, and established financing structures incompatible with efficient long-term investment;
- Fund ownership has been an exercise in disinvestment and the removal of capital, not new investment in growth and development;
- the managements of the utilities were presented with a serious conflict of interest. The personal rewards were greatest if management facilitated the take-overs and shared in the very substantial payouts. This conflicts with their stewardship responsibilities to the government and the public for developing and managing important infrastructure assets and services.

#### 8.7 PUBLIC UTILITY GOVERNANCE

Public utility governance in Europe, including industry-specific regulation in most countries, is now focused on the responsibilities for public service provision by utility infrastructure providers. It typically does not include powers

relating to financing, ownership or management. The experience of the Funds entry into the telecom sector using leveraged buyouts has demonstrated that these regulatory powers are not sufficient enough to protect the public interest under conditions of Fund ownership. Thus, the governance authorities for telecom and other public utility industries need to have their regulatory powers strengthened to enable effective governance over utility financing practices.

Effective financial sector governance of Funds will protect investors, such as pension funds, and the increased transparency that results from this will facilitate public utility regulation. However, if the public service objectives of government policy for public utility infrastructure and services development are to be implemented effectively, additional transparency will be necessary. Public utility regulators will need to have complete transparency with respect to all transactions affecting the implementation of existing public service responsibilities, including financing, investment and expenditure activity, as well as the periodic reporting of indicators of public service performance. Moreover, regulators will need to be empowered to prevent financial practices and transactions that are contrary to the public interest in long-term infrastructure and services development. More specifically, public utility regulators will need to be empowered to require the utilities to put forward the following for advance approval against the public interest standard established in the law:

- 1 all proposed payments to owners and their affiliated companies and partners, fees for financial services, non-arm's-length transactions, management fees and bonuses;
- 2 a sustainable long-term investment program that will continue infrastructure and services development to meet the utilities' public interest obligations under the law;
- 3 a sustainable long-term financing plan based on generally accepted norms for utility sector financing;
- 4 a sustainable long-term human resources development plan to make full and effective use of staff resources;
- 5 a research and development program that will ensure that the utilities maintain efficiency in light of technological and market changes.

These plans and programs simply reflect what any responsible public utility management would be expected to have on a ongoing basis.

The strengthened regulator's powers recommended here are not without precedent. Most utility regulatory agencies in the US and Canada have strong regulatory powers over the financial practices of public utilities precisely because they are "businesses affected with a public interest". A Fund leveraged buyout of an incumbent utility operator that was the dominant provider in its industry with universal service and other public interest obligations could not take place in the US today without advanced approval from one or more utility regulatory authorities, and ongoing regulation that encompassed both operational and financial matters.

During the process of privatisation of public utilities, some governments have provided maximum limits on the percentage share ownership of a single party, and/or retained a single “golden share” of equity ownership. The former is to protect against the takeover by special interests with a narrow agenda. The latter has been to ensure that a government is informed of a utility’s plans, and reserves the power to veto major decisions if the government believes they are contrary to the public interest. This is justified because of the importance to the general public, the economy and society of the major decisions of public utility managers and owners. In light of the potentially negative effects of Fund ownership on public utility infrastructure development, governments may wish to consider applying these principles to privatized public utilities.

Strengthened utility governance mechanisms, such as industry-specific regulation, limits on ownership concentration, and the use of golden shares, are necessary to prevent Funds from trading off a utility’s long-term value to investors, the economy and society for short-term cash value to the Funds and their investors. For the utility sector of the economy, the Funds’ obsession with short-term cash value must be constrained.

## NOTES

- 1 Background paper prepared for the report, *Hedge Funds and Private Equity: a Critical Analysis*, by the Socialist Group in the European Parliament, 2007.
- 2 Guest Professor, Center for ICT, Technical University of Denmark. Visiting Professor, London School of Economics and University of Witwatersrand. Emeritus Professor, TU Delft.
- 3 Melody, W. (ed.) (1997). *Telecom reform: principles, policies and regulatory practices*, chapter 2.
- 4 See Hall 2006.
- 5 COM (2005) 229 “i2010 – A European Information Society for growth and employment.” p. 4.
- 6 See Leavy, D. 2006, and eircom, Annual Reports.
- 7 Source: ECTA Scorecard 2006.
- 8 See the TDC and NTCH Annual Reports. For a more detailed analysis of TDC as a case study, see chapter XX, Melody, W.H. “Implications of the Leverage Buyout of TDC”. See also Melody 2007.

## REFERENCES

- COM (2006) 215 final i2010 – First Annual Report on the European Information Society, available on [http://ec.europa.eu/information\\_society/eeurope/i2010/docs/annual\\_report/com\\_2006\\_215\\_en.pdf](http://ec.europa.eu/information_society/eeurope/i2010/docs/annual_report/com_2006_215_en.pdf).
- COM (2005) 229 ‘i2010 – A European Information Society for growth and Employment’.
- EIRCOM, Annual Reports, 2001, 2005.
- Hall, D. (2006) Private equity and infrastructure funds in public services and utilities, November, available on [www.epsu.org](http://www.epsu.org).
- Leavy, D. (2007) Incumbent LBOs, The Irish Experience. Power point presentation at CICT Policy Conference, 13 October, available on [www.cict.dtu.dk](http://www.cict.dtu.dk).
- Melody, W.H. (ed.) (1997) *Telecom Reform: Principles, Policies and Regulatory Practices*. Lyngby: Den Private Ingeniorfond, DTU.
- Melody, W.H., (2007). ‘The Private Equity Takeover of Telecom Infrastructure in Denmark: Implications for Network Development and Public Policy,’ *Nordic and Baltic Journal of Information and Communication Technologies* (NB!ict) 1, 1, 27-45.
- Nordic Telephone Company Holding, Quarterly Reports and Annual Report 2006.
- Rappaport, A. (2005) ‘The Economics of Short-term Performance Obsession’ *Financial Analysts Journal* 61, 3.
- Schiller, B. (2006) ‘Trading down corporate responsibility’ *Ethical Corporation*, 14 November.
- TDC Annual Reports, 2004.



## 9 PUBLIEKE BELANGEN, OVERHEIDSBELEID EN INVESTERINGEN IN INFRASTRUCTUUR

*Jan de Pree*

### 9.1 INLEIDING

Rond het jaar 2000 begonnen de begrippen *publiek belang* en *publieke belangen* bijzondere aandacht te krijgen. In eerste instantie stond de vraag voorop hoe aan-gelegenheden waarvoor de overheid de eindverantwoordelijkheid draagt het beste behartigd zouden kunnen worden. Publiek belang fungeerde als startpunt voor een vergelijkend onderzoek van verschillende uitvoeringsmodaliteiten van tradi-tionele overheidstaken, met als uiteindelijk doel te komen tot beantwoording van, wat vereenvoudigd, de vraag ‘behartiging door de overheid of door de particuliere sector’. De beantwoording van deze vraag vereist verschillende afwegingen, en tenzij het publiek belang verabsoluteerd wordt, is het onvermijdelijk dat de kosten om een publieke doelstelling beter te bereiken bij arrangement (1) worden afgezet tegen de besparingen die het minder garanties biedende arrangement (2) biedt. De grens tussen de ‘technische’ hoe-vraag en de ‘politieke’ wat-vraag wordt op deze wijze enigszins diffuus. Een verdere complicatie vloeit voort uit het feit dat vrij-wel tegelijk met de introductie van het *publiek belang* het politieke karakter van de wat-vraag werd betwist: de economie zou, al calculerend, tot een objectievere be-paling van het publiek belang kunnen komen. Deze claim speelt nog steeds een rol.

Hoewel *publiek belang* en *publieke belangen* dus niet de ongecompliceerde, tot eenvoudige antwoorden leidende begrippen zijn, die zij op het eerste gezicht lij-ken, is het niet verwonderlijk dat zij vooral in infrastructuur-gebonden sectoren nog steeds terugkeren. Juist hier zal de verdeling van verantwoordelijkheden door technische, economische en politieke ontwikkelingen onder druk blijven staan, terwijl de financiële en maatschappelijke belangen zeer groot zijn. Een vast ijk-punt in discussies over liberalisering, privatisering en publiek-private samen-werking kan dan welkom zijn, zelfs als alleen de term zelf en niet de inhoud ervan constant is.

Dit hoofdstuk geeft in de eerste plaats een beknopt nader overzicht van de achter-grond, introductie en verspreiding van het begrip *publiek belang* bij de bepaling van het overheidsbeleid, in het bijzonder bij de vormgeving van dat beleid in infra-structuur-gebonden sectoren. De dienstverlening in traditionele nutssectoren komt aan de orde bij de algemene beschouwingen in paragraaf 2, in paragraaf 3 worden transportdiensten besproken, terwijl in paragraaf 4 het accent op infra-structuur zelf ligt. Volledigheid is in geen van deze gevallen nagestreefd; het accent is gelegd op sectoren waar in deze eeuw structurele veranderingen zijn of worden overwogen. Voorts worden hoofdlijnen van de discussie over de vaststel-ling van het publiek belang geschetst in paragraaf 5. Paragraaf 6 bevat een korte concluderende nabeschuiving.

## 9.2 ACHTERGROND, INTRODUCTIE EN VERSPREIDING: NUTSSECTOREN

### 9.2.1 INFRASTRUCTUUR-GEBONDEN SECTOREN

In een aantal vitale infrastructuur-gebonden sectoren vervulde de overheid vanouds een cruciale rol, niet in de eerste plaats vanwege het belang van die sectoren, maar vooral omdat de koppeling van diensten en infrastructuur tot een natuurlijk monopolie leidde of omdat de aard van de infrastructuur afrekenbare dienstverlening niet goed mogelijk maakte. Bij de eerste categorie moet gedacht worden aan infrastructuur-gebonden nutsvoorzieningen, bij de tweede aan, in elk geval in de praktijk, niet rivaliserende en/of niet exclusieve goederen als dijken en wegen. In deze situatie was het min of meer vanzelfsprekend dat de overheid, zelf of via door haar gecontroleerde monopolistische (nuts)bedrijven, besliste over aanleg en onderhoud van de infrastructuur. Omdat tussen gebruik en betaling, en dus opbrengst, geen relatie bestond óf doordat sprake was van een monopolist die de tarieven kon vaststellen, was economisch rendement niet de doorslaggevende reden om al dan niet tot investering over te gaan. Uiteraard vormden de verwachte maatschappelijke behoeften wel de voornaamste indicator.

Wat hiervan precies zij, de betreffende activiteiten van de overheid werden, per definitie, geacht in het *algemeen belang* te worden verricht, en het resultaat te zijn van afweging van alle relevante belangen. Bij twijfel stonden politieke wegen open om te trachten het beleid te veranderen, een mogelijkheid die in de loop van de tijd reëler werd door toeneming van beleidsmatigheid en openbaarheid van bestuur, en bij beweerde, te vergaande, schending van *particuliere belangen* kon men zich tot de rechter wenden.

### 9.2.2 HEROVERWEGING VAN PRESTERENDE OVERHEIDSTAKEN EN HUN UITVOERING

Vanaf circa 1980 staan de omvang van de overheidstaken en de wijze van uitvoering vrijwel voortdurend ter discussie. Dit geldt in het bijzonder voor de zogenaamde 'presterende taken', activiteiten waarbij de overheid zorg draagt voor de productie en levering van goederen en diensten. Het voert te ver om een overzicht te geven van alle veranderingen die inmiddels in dit kader hebben plaatsgevonden; zowel de motieven voor de ingrepen als hun inhoud zijn zeer divers.

Bij de motieven ging het in eerste instantie om inperking van de collectieve sector in economisch moeilijke tijden. Staatsbedrijven werden, met aanzienlijke opbrengsten, afgestoten (Fokker, DSM, KLM), omdat hun product ook 'op de markt' tot stand zou komen. Dit spoor zou uitlopen op de discussie over kerntaken, met als voorlopige conclusie dat zo'n absoluut minimum aan overheidsactiviteit niet objectief en voor altijd valt aan te geven (Donner 1998). Vervolgens was het vooral de gedachte dat uitvoering van activiteiten buiten de eigenlijke departementen voordelen kon opleveren: de 'overbelaste' ministeriële verant-

woordelijkheid zou kleiner worden door inschakeling van zelfstandige bestuursorganen, en min of meer bedrijfsmatig opererende eenheden zouden tegen lagere kosten hetzelfde werk kunnen doen (verhoging van de ‘kleine efficiëntie’). De netwerksectoren namen bij deze herschikkingen een bijzondere plaats in: pas in de loop van de jaren negentig won de gedachte veld dat een natuurlijk monopolie bij het netwerk het optreden van verschillende dienstverleners niet hoefde uit te sluiten. Concurrentie zou tot welvaartsverhoging leiden (verhoging van de ‘grote efficiëntie’), en verkoop van overheidsbedrijven die zich hiermee tot dan toe bezighielden zou de staatskas (en de kas van andere overheden) spekken. Over de stapsgewijze doorvoering van de ontbundeling, verzelfstandiging en marktwerking in de nutssectoren, die per sector verschilt en in sommige sectoren volgens de huidige inzichten onvolledig zal blijven (bijvoorbeeld drinkwater: slechts omvorming van de nutsbedrijven tot vennootschappen naar burgerlijk recht), wordt in andere bijdragen al voldoende opgemerkt. Essentieel is hier dat de overheid op het transitieproces en op de nieuwe verhoudingen en partijen invloed wilde houden, anders dan bij de eerdere afstoting van staatsbedrijven. In de nieuwe constellatie(s) zouden maatregelen nodig zijn om toetreding tot en concurrentie op nieuwe markten daadwerkelijk mogelijk te maken, en vooral zouden de belangen van de afnemers van essentiële diensten verzekerd moeten blijven.

### 9.2.3 DE INTRODUCTIE VAN ‘PUBLIEK BELANG’

Verzelfstandigde uitvoering, privatisering en liberalisering zijn operaties waaraan dus bepaalde voordelen worden toegedacht; de politieke en financieel-economische druk om ertoe over te gaan kan sterk zijn. Tegelijk ligt de veronderstelling voor de hand dat de overheid de betrokken taken in de gekozen uitvoeringsmodaliteiten niet zonder reden ter hand heeft genomen. Ceteris paribus is het plausibel om, alvorens over te gaan tot herverdeling van verantwoordelijkheden, na te gaan in hoeverre die redenen nog van kracht zijn. Aansluitend kan dan worden gezien bij welke institutionele vormgeving van de betrokken sector de voordelen van verzelfstandiging, concurrentie enzovoort, die resterende motieven het best tot hun recht kunnen komen. Ten slotte worden dan binnen de gekozen structuur garanties ingebouwd om dit laatste aspect daadwerkelijk te kunnen verzekeren.

Deze vereenvoudigde weergave van de werkelijkheid – op de complicaties wordt hierna teruggekomen – impliceert een, gefaseerde, afweging. Partiële afwegingskaders waarin aanwijzingen werden gegeven voor de gedachtevorming rond bepaalde ingrepen, waren in de loop van de jaren negentig al door de overheid zelf ontwikkeld. Voor de (re)organisatie van de overheid waren er bijvoorbeeld het rapport *Verantwoord verzelfstandigen* uit 1994 (later verwerkt in de *Aanwijzingen voor de regelgeving*) en voor de introductie van marktwerking de *Nota inzake staatsdeelnemingen* (1997). Kenmerkend voor deze kaders was dat zij zich richtten op de consequenties van één bepaalde constructie.

In deze stukken kwamen termen als collectief en algemeen belang in ruime mate voor. De term ‘*publiek belang*’ deed pas in het jaar 1999 zijn intrede in de beleids-

discussie op dit terrein. De introductie gebeurde in de WRR-voorstudie *Over publieke en private verantwoordelijkheden* (WRR 1999), een bundeling van artikelen die waren opgesteld in het kader van de voorbereiding van het rapport *Het borgen van publiek belang* (WRR 2000). De voorstudie leidde tot Kamer-vragen, die aanleiding waren voor de notitie *Liberalisering en privatisering van netwerksectoren; Publieke belangen en marktordening* van de minister van Economische Zaken (Tweede Kamer 1999-2000, 27018, nr. 1; zie verder paragraaf 2.6). Deze notitie verscheen op 21 februari 2000, ruim twee maanden vóór *Het borgen van publiek belang* dat op 26 april werd aangeboden. Echt belangrijk was de vraag wie de primeur had overigens niet, al was het maar vanwege het verschil in terrein: de nota van Economische Zaken beperkte zich in hoofdzaak tot marktordening in netwerksectoren, de WRR richtte zich vooral op de borgingmechanismen bij diverse institutionele verhoudingen, in beginsel op alle beleidsterreinen.

#### 9.2.4 HET BORGEN VAN PUBLIEK BELANG

*Het borgen van publiek belang* onthield zich, en dat is een essentieel punt, van een beantwoording van de vraag *wat* het publiek belang was, en ook van rationele criteria om die vraag te beantwoorden; die beslissing werd aan de politiek overgelaten. Het rapport beperkte zich uitdrukkelijk tot behandeling van de *hoe*-vraag, de vraag op welke wijze eenmaal vastgestelde publieke belangen het best geborgd zouden kunnen worden. Publieke belangen werden hierbij gedefinieerd als die maatschappelijke belangen – belangen waarvan de behartiging voor de samenleving als geheel gewenst is – die zonder overheidsbemoeienis niet goed verwezenlijkt zouden worden en waarvoor de overheid derhalve eindverantwoordelijkheid aanvaardde. Eindverantwoordelijkheid, dat wil zeggen verantwoordelijkheid voor adequate behartiging, niet per se behartiging/uitvoering door de overheid zelf.

Het rapport onderscheidde *vijf mogelijkheden om de operationele verantwoordelijkheid voor publieke belangen gestalte te geven*, te weten behartiging ervan door concurrerende particuliere partijen onder regie van de overheid, door private partijen aan wie is uitbesteed, door professionele partijen, behartiging onder directe ministeriële verantwoordelijkheid en inschakeling van zelfstandige bestuursorganen. Vervolgens werden *vier borgingmechanismen* genoemd, die elk in meer of mindere mate bij de diverse verantwoordelijkheidstoedelingen bruikbaar zijn: regels (vastgelegd in wetten of contracten), concurrentie (om de markt of bij uitbesteding), hiërarchie (van de politieke bestuurder t.o.v. zijn ondergeschikten) en institutionele concurrentie (versterking van waarden en normen binnen een uitvoerende organisatie). De werking van deze borgingmechanismen bij de verschillende verantwoordelijkheidstoedelingen werd geanalyseerd om vervolgens te worden beoordeeld op vijf *criteria*, effectiviteit, efficiëntie, democratische legitimatie, rechtsgelijkheid en rechtszekerheid. Het ging hierbij om dienstverlening op allerlei terreinen van levering van elektriciteit tot en met toekenning van studietoelagen. De vijf *criteria* hadden hierom een wisselend gewicht, maar uiteindelijk zou wel een rationele keuze van borgingmechanismen mogelijk worden, aldus het rapport.

De hoofdlijnen van de redenering zijn hiermee aangegeven, maar een aantal niet onbelangrijke details verdient nog vermelding. Het gaat om punten die in latere beschouwingen over het onderwerp steeds terugkeren en speciaal voor infrastructuur-gebonden sectoren van belang zijn.

- a. Explicitering en precisering van publieke belangen zijn essentieel. Zonder deze is goede besluitvorming over de borging niet mogelijk en kan de overheid ook slecht afgerekend worden op het resultaat.
- b. Vaak zijn verscheidene publieke belangen in het geding die soms ieder een eigen verdeling van publieke en private verantwoordelijkheden vergen; afweziging en (weer) aansluitend heldere formulering, zoveel mogelijk in de wet, zijn hiervoor nodig.
- c. Publieke belangen zijn niet onveranderlijk: afgezien van het politieke karakter van de keuze kunnen ook technische ontwikkelingen tot verandering leiden. Ter illustratie werd de elektriciteitssector behandeld; een citaat:

“De productie en levering van elektriciteit waren (lange tijd) een publiek belang omdat (1) het een maatschappelijk belang was dat iedereen over elektriciteit kon beschikken en (2) de markt faalde vanwege het natuurlijke monopolie karakter van het netwerk. Aan het algemene belang van de levering van elektriciteit waren andere publieke belangen verbonden: veiligheid, duurzaamheid, universele dienstverlening”, (...).

Door technologische ontwikkelingen is de aard van dit publieke belang recentelijk veranderd. Concurrentie op één en hetzelfde net is tegenwoordig wel mogelijke en er is van een natuurlijk monopolie (de beperking ‘met betrekking tot de dienstverlening/de levering van elektriciteit’ is hier ten onrechte achterwege gelaten, JdP) geen sprake meer. Deze concurrentie wordt bovendien gekatalyseerd door richtlijnen van de EU. Hiermee zijn de productie en levering van elektriciteit op zich geen publiek belang meer. Er wordt nog steeds een maatschappelijk belang mee gediend, maar behartiging behoeft geen betrokkenheid meer van de overheid.

Wel resteren in dit kader andere publieke belangen: randvoorwaarden die aan de productie en levering van elektriciteit moeten worden gesteld. Hierbij gaat het gedeeltelijk om dezelfde publieke belangen die ook in de monopoliesituatie van belang waren: veiligheid, universele dienstverlening, betrouwbaarheid, milieuvriendelijkheid, enzovoort. Maar er dienen zich ook andere publieke belangen aan, die nu juist verbonden zijn met het mogelijk maken en garanderen van concurrentie. Deze hebben betrekking op transparantie, op onafhankelijkheid van het netbeheer en op toegang tot het net op basis van algemene, niet-discriminerende voorwaarden.

(...)“Door een verandering van de context vergt de wat-vraag een nieuw antwoord. Dat ook een nieuw antwoord op de hoe-vraag moet worden gegeven, is hiervan slechts het gevolg. Dit geldt ook voor verschillende andere nutsvoorzieningen: de werkelijke veranderingen hebben zich voorgedaan ten aanzien van de aard van het publieke belang. Omdat (meer) concurrentie bij productie en levering mogelijk is geworden, hoeft de overheid zich hieraan niet meer te committeren en kan zij zich bepalen tot randvoorwaarden waaronder geproduceerd en geleverd wordt.” (blz. 49-50).

- d. Ten slotte wordt gewezen op het belang van de combinatie van borgingmechanismen. Als voorbeeld wordt genoemd de versterking van de relevante waarden en normen binnen een private organisatie, maar ook allerlei andere vormen van ‘redundantie’ zijn denkbaar.

### 9.2.5 BORGING VAN PUBLIEKE BELANGEN, HET KABINETSTANDPUNT INZAKE HET BORGEN VAN PUBLIEK BELANG

In mei 2001, ruim een jaar na publicatie van het rapport, verscheen het kabinetstandpunt inzake *Het borgen van publiek belang*. De reactie (Tweede Kamer 2000-2001, 27771, nr. 1) moest tevens beschouwd worden als een integrale beleidsvisie op marktwerking, liberalisering, verzelfstandiging en privatisering, waar de Eerste Kamer om had gevraagd. Het stuk voegt weinig wezenlijks toe aan de vorige notitie. Uiteraard wordt de stelling van de WRR bestreden dat in het verleden te weinig doordacht geliberaliseerd en geprivatiseerd is (waarbij ook de definitie van deze begrippen wordt bekritiseerd); verwezen wordt naar (toen) bestaande afwegingskaders (1) gericht op de organisatie van de overheid, zoals *Verantwoord verzelfstandigen* (1994), *Aanwijzingen voor de regelgeving* (1996), de kabinetsreactie op het advies *De overheid de markt in- of uitprijzen* van de Raad voor het Openbaar Bestuur (februari 2000), en beleidskaders voor *government governance*, agentschappen en zelfstandige bestuursorganen, (2) gericht op de introductie van marktwerking zoals de *Nota inzake staatsdeelname* (Tweede Kamer 1996-1997, 25178), en de *Nota inzake liberalisering en privatisering in netwerksectoren* (zie punt 5), kaders voor de inrichting en vormgeving van toezicht (*De ministeriële verantwoordelijkheid ondersteund – 1998 – en Vertrouwen in onafhankelijkheid* uit 2000), en (4) kaders voor specifieke uitvoeringsmodaliteiten, met name *notitie over PPS* (vanaf 1999), over *concessies en aanbestedingen* (2000) en over *competitieve dienstverlening* (2000). Bij deze lange lijst past uiteraard ook een afwijzing van het door de WRR bepleite uniforme beleidskader ten behoeve van de borging van publieke belangen (een term waarvan de uitvinding trouwens wel aan de WRR gegund wordt): gelet op de omvangrijke onderlinge verschillen tussen de terreinen van zorg waar de overheid verantwoordelijk is, is geen ruimte voor meer dan een lijst van aandachtspunten (“voor blauwdrukken is in dezen geen plaats”).

Die lijst wordt inderdaad gegeven. Zij bevat in drie onderdelen een tiental vragen.

#### I Publieke belangen

1 Wat zijn de publieke belangen en hoe dienen deze te worden vastgelegd?

#### II Verkenning van de verschillende uitvoeringsmogelijkheden (publiek of privaat)

##### A Borging van publieke belangen via de overheidsorganisatie

2 Dienen de publieke belangen door de centrale overheid of decentraal te worden geborgd?

3 Zijn er bij centrale borging redenen voor bevoegdheidsoverdracht aan een orgaan dat niet onder volledige ministeriële verantwoordelijkheid valt (ZBO)?

4 Zijn er bij centrale borging redenen voor interne verzelfstandiging?

##### B Borging van publieke belangen bij concurrentie

5-7 Kan borging worden gerealiseerd bij concurrentie op de markt, bij concurrentie om de markt of bij maatstafconcurrentie?

- 8 Bezien moet worden hoe omgegaan moet worden met het eigendom van bedrijven, voor zover dit in overheidshanden is

C Toezicht

- 9 Beoordeling van aspecten van verantwoording en toezicht.

III *Afweging van uitvoeringsmogelijkheden op basis van criteria van goed bestuur (algemene rechtsbeginselen, sociale rechtvaardigheid, doeltreffendheid, doelmatigheid en houdbaarheid)*

- 10 Welke uitvoeringsmodaliteit draagt het meest bij aan een adequate borging van de gedefinieerde publieke belangen?

De nadere beschouwingen bij de onderdelen van de lijst lijken sterk op de overwegingen uit het hierna te bespreken *Publieke belangen en marktordening*, met name uiteraard bij II B. Nieuw is de afweging op basis van criteria van goed bestuur, die overeenkomst vertonen met de criteria uit *Het borgen van publiek belang*, maar dan zonder opmerkingen over hun onderlinge gewicht. Deze afweging gaat verder dan de vergelijking van marktordeningsmodaliteiten uit *Publieke belangen en marktordening*, waar slechts de effectiviteit in engere zin van de borging aan de orde kwam.

### 9.2.6 LIBERALISERING EN PRIVATISERING VAN NETWERKSECTOREN; PUBLIEKE BELANGEN EN MARKTORDENING

Deze kabinetsnotitie uit februari 2000 is de eerste die exclusief publieke belangen in infrastructuur-gebonden sectoren behandelt. De notitie werd uitgebracht naar aanleiding van vragen uit de Tweede en de Eerste Kamer van eind oktober, respectievelijk medio november 1999: het ging erom 'hoe de overheid haar verantwoordelijkheid voor publieke belangen in netwerksectoren' bij de recente ontwikkelingen aldaar 'op de meest doelmatige effectieve wijze kon waarborgen'. De Kamervragen waren ongetwijfeld mede geïnspireerd door de al genoemde WRR-voorstudie *Over publieke en private verantwoordelijkheden* die in het kader van project *Het borgen van publiek belang* in de zomer van 1999 was uitgebracht. De term was nieuw, de zorg minder: bij de parlementaire behandeling van de Elektriciteitswet 1998 waren, in andere termen, de verantwoordelijkheden van de overheid voor een adequate elektriciteitsvoorziening ook na de voorgestelde introductie van marktwerking prominent aan de orde geweest (Stefanski et al. 2007). De notitie zelf legt het accent op de marktordeningsvraag en veel minder op de borgingmechanismen. De volgorde waarin de modellen worden behandeld, van maximale concurrentie tot en met privatisering, weerspiegelt de opstelling van Economische Zaken van dat moment, (te) eenvoudig samen te vatten als 'markt, tenzij'.

Interessant is de achtergrondschets uit de notitie. In de eerste plaats blijkt daaruit hoezeer liberalisering en privatisering onderdeel zijn van de langer lopende en nooit ophoudende discussie over het functioneren van de overheid.

“De discussie over liberalisering en privatisering in netwerksectoren dient in het licht te worden gezien van de geleidelijke veranderingen die de laatste decennia hebben plaatsgevonden in de taakopvatting en het functioneren van de overheid. Dezelfde discussie heeft aanleiding gegeven tot het op de agenda zetten van publiek-private samenwerking. Deze veranderingen zijn – behalve door internationale ontwikkelingen – ingegeven door zowel financieel-economische als politiek-bestuurlijke motieven. Bij de financieel-economische motieven is van belang het beslag dat de uitvoering van – en investeringen in – sommige publieke voorzieningen per saldo (na aftrek van ontvangsten) op de begrotingen van overheden legt.

De politiek-bestuurlijke motieven spelen bij een heldere afbakening van de kerntaken van de overheid en, meer recentelijk, bij de vraag hoe de ministeriële verantwoordelijkheid dient te worden geëffectueerd. Het gaat hierbij om de effectiviteit en legitimiteit van het overheidshandelen; een betrouwbare overheid.”

Alle steekwoorden uit de vijftien voorafgaande jaren van spreken over reorganisatie van de overheid in een enkele alinea bijeen. Ook de aansluitende passage, waarin in algemene zin wordt aangegeven waarom de overheid na privatisering en liberalisering toch invloed moet houden, geeft in weinig woorden de kern van het discours van het moment weer.

“De verzelfstandiging van overheidsbedrijven heeft nader aandacht gevraagd voor de vormgeving van toezicht en de effectivering van de ministeriële verantwoordelijkheid. Omdat directe politieke aansturing na (externe) verzelfstandiging niet meer mogelijk is en het publiek aandeelhouderschap binnen het structuurregime beperkte beïnvloedingsmogelijkheden biedt, is de vormgeving van toezicht van belang geworden.”

Ook daar waar verzelfstandiging gepaard ging met het openstellen van markten voor nieuwe toetreders (openbaar vervoer, energie) is duidelijk geworden dat de overheid zich niet geheel kan terugtrekken. Zowel voor het corrigeren van markt-imperfecties als voor het waarborgen van publieke belangen is een sterke overheid nodig. Introductie van concurrentie ging en gaat dus vaak gepaard met meer en andere regelgeving en met een actievere overheid.

Inhoudelijk bepaalde de notitie zich, anders dan het WRR-rapport, dat heel in het algemeen allerlei vormen van dienstverlening betrof, tot de vraag “hoe de overheid haar verantwoordelijkheid voor publieke belangen in netwerksectoren op een effectieve en doelmatige wijze kan waarborgen”. De aandacht werd dus toegespitst op gebieden waar het de WRR nu ook om gaat (netwerksectoren werden omschreven als sectoren waarin aanbieders producten en diensten aanbieden via infrastructures, waarbij de infrastructuur meestal leidinggebonden is, maar kan bestaan uit een netwerk van ‘knooppunten’). De behandeling van de vraag naar de borging beperkte zich echter (hoofdzakelijk) tot de keuze van de marktordening, of beter tot de ontwikkeling van systematische afwegings-methode bij het voorbereiden van zo’n keuze. Hoewel de overheid tegenwoordig iets minder uitgesproken is in haar voorkeur voor concurrentie,

is de gevolgde denkwijze nog steeds van invloed. Dit vraagt om een overzicht.

De notitie onderscheidt vijf stappen waarmee op de gestelde vraag antwoord wordt gegeven. *Eerste stap* is helder definiëren door de overheid van de relevante publieke belangen, en daarmee van haar eigen verantwoordelijkheid. De aansluitende *tweede stap* bestaat uit de vertaling ervan in heldere regelgeving of concessievoorwaarden.

De notitie is hier inderdaad duidelijk, althans benoemt de belangen: universele dienstverlening (UDV), bescherming van de gebonden afnemer, leveringszekerheid, kwaliteit, milieu, veiligheid en volksgezondheid en doelmatige marktwerking en doelmatig toezicht. Tezamen vormen zij “het maatschappelijk eisenpakket waaraan de productie van de goederen en diensten door nutsbedrijven dient te voldoen”. De keuze van elk van deze belangen wordt toegelicht, maar zeker niet met een economische redenering onderbouwd. Hierbij is ook aandacht voor de borgingmogelijkheden. Een enkel voorbeeld bij het publieke belang van UDV, waarbij de volgende productiemogelijkheden werden onderscheiden:

- een overheidsbedrijf stelt de dienst tegen voor iedereen gelijke voorwaarden beschikbaar, verlies-latende aansluitingen worden door winstgevende gesubsidieerd en ter voorkoming van *cherry-picking* mogen particuliere bedrijven de dienst niet leveren;
- een privaat bedrijf krijgt via aanbesteding een concessie (monopolie) voor een bepaald gebied, met daaraan gekoppeld een UDV-verplichting die intern via verevening (of via subsidie, JdP) wordt gefinancierd (bijvoorbeeld busvervoer);
- er is vrije markttoetreding, maar één deelnemer krijgt opdracht de onrendabele aansluitingen te verzorgen (zo nodig door een heffing op de andere deelnemers gefinancierd);
- vrije toetreding met een wettelijke verplichting voor alle aanbieders om klanten een minimumaanbod te garanderen (*must carry*-verplichting in de telecomsector).

De *derde stap* bestaat uit het creëren van goed toezicht op de naleving door de betrokken bedrijven. Hierbij wordt onderscheiden tussen (1) het controleren van de naleving van wettelijke (kwaliteits)normen en verplichtingen inzake UDV, leveringszekerheid, productkwaliteit e.d. en (2) toezicht op het marktgedrag of economische prestaties van ondernemingen. De verdere bespreking omvat ook hier overwegingen over de keuze tussen verschillende modellen, vergezeld van algemene wijsheden als de publieke “belangen vormen als het ware de maatschappelijke randvoorwaarden waarbinnen ordening van markten moet plaatsvinden”, “een onvoldoende geïnformeerde toezichthouder dreigt (...) een ‘gevangene’ te worden van de organisaties waarop hij toezicht moet houden” en “positionering van het toezicht is een kwestie van maatwerk”, en nadere standpunten zoals terughoudendheid met sector-specifieke mededingingsregels naast het NMa-toezicht.

Als vierde vraag komt aan de orde of concurrentie behulpzaam kan zijn bij het zo effectief en doelmatig mogelijk behartigen van de publieke belangen, waarbij concurrentie uitdrukkelijk (dus) niet als doel op zichzelf wordt gezien. Gewezen wordt op de bekende achtergronden van natuurlijke monopolies (hoge verzonken kosten, netwerk-externaliteiten en schaal- en synergievoordelen) en op het belang (“om de markt zo goed mogelijk zijn werk te laten doen”) van zo strikt mogelijke scheiding tussen de potentieel competitieve segmenten van een markt (productie en levering) en het niet-competitieve marktsegment (het netwerk). De aansluitende schets over de borging van publieke belangen bij verschillende, in volgorde van afnemende concurrentie gerangschikte, vormen van marktordering, betreft weliswaar de dienstverlening, maar is niettemin interessant vanwege die modaliteiten.

Bij concurrentie *tussen infrastructuren* (bijvoorbeeld: de telecommunicatiesector, waar aanbieders van diensten tussen verscheidene netwerken kunnen kiezen) blijven specifieke regelgeving en toezicht nodig voor publieke belangen als kwaliteit, veiligheid, milieu en volksgezondheid, maar overigens is de zaak eenvoudig: als klanten keuzevrijheid hebben zijn er geen gebonden klanten meer, is ook de leveringszekerheid voldoende gewaarborgd en kan UDV verzekerd worden door, waar nodig, deze aansluitingen aan één aangewezen partij op te dragen (zie hiervoor).

Concurrentie *op de infrastructuur* (bijvoorbeeld de elektriciteitssector) komt aan de orde bij één infrastructuur, waarvan technisch gezien gebruikgemaakt kan worden door meerdere aanbieders. Hier geldt ten aanzien van de borging van publieke belangen hetzelfde, met enige aanvullingen. Met het oog op de leveringszekerheid zijn, omdat het beheer een monopolie blijft, regels nodig over toedeling en uitbreiding van capaciteit, en het gemeenschappelijk gebruik kan uit het oogpunt van volksgezondheid en veiligheid specifieke regels nodig maken (bijvoorbeeld de gassector).

Concurrentie *om de markt* (bijvoorbeeld: personenvervoer per spoor en stads- en streekvervoer) kan, vooral uit een oogpunt van doelmatigheid, interessant zijn als ook op concurrentie op de infrastructuur niet mogelijk is (personenvervoer per spoor) of niet lonend (stads- en streekvervoer) of beide. Na een biedprocedure kan dan een (exclusieve) concessie worden verleend aan één partij, eventueel met afspraken over subsidiëring. De notitie spreekt hier van publiek-private samenwerking (PPS) en van aanbestedingen, termen die tegenwoordig meer gereserveerd worden voor concrete (infrastructurele werken), niet direct voor wettelijk geregelde concessies (spoor e.d.); in 2000 ontbraken deze laatste echter nog. De publieke belangen betreffende milieu, kwaliteit enzovoort kunnen ook bij concessieverlening via specifieke wetgeving en toezicht worden geregeld en gehandhaafd, en voor de andere publieke belangen (UDV, leveringszekerheid, enzovoort) gebeurt dit via de concessievoorwaarden.

*Maatstafconcurrentie en benchmarking* (bijvoorbeeld de drinkwatersector) wordt als laatste mogelijkheid genoemd de bedrijven in kwestie te ‘prikkelen’, als, bijvoorbeeld door de onvermijdelijkheid van (regionale) monopolies iedere vorm van concurrentie ontbreekt. Beide instrumenten komen neer op vergelijking van prestaties, met andere regionale monopolisten of, bij een landelijke monopolist met buitenlandse collega’s, de vergelijkingspunten, de vorm van het toezicht en de sancties (bij benchmarking ontbreken de laatste, aldus de notitie over het verschil) zijn uiteraard punten van nadere zorg. In deze marktform (bedoeld zal zijn: monopolie) vereist dit meer nog dan bij concessies scherpe regelgeving c.q. contractering en goed toezicht om de publieke verantwoordelijkheid vorm te geven: in specifieke wetgeving of – bij een overheidsbedrijf – in een contract tussen overheid en aanbieder moeten bepalingen worden opgenomen over UDV, leveringszekerheid (investeringsplichten), het gebruik van het netwerk e.d.; de andere publieke belangen kunnen en moeten zoals steeds door specifieke wetgeving en kwaliteitstoezicht geborgd worden.

De laatste, *vijfde* stap, betrof de eigendomspositie van de ondernemingen. Deze bleek niet zozeer behandeld te worden met het oog op optimale behandeling van publieke belangen, als wel vanuit een beginselvoorkeur voor privatisering; de vraag was vooral wat overheidseigendom aan wetgeving zou kunnen toevoegen. “De noodzaak publieke belangen te behartigen betekent (...) niet dat de overheid zelf ook producent moet zijn van deze diensten” en “wanneer een markt wordt geliberaliseerd, ligt de vraag voor of het zinvol is het publieke eigendom van een onderneming te handhaven”, aldus de minister (Jorritsma). “Ook voor gewone marktsectoren stelt en handhaaft de overheid regels voor kwaliteit, veiligheid, volksgezondheid en milieu (blz. 14).” Overigens werd onderscheiden tussen privatisering in een concurrerende markt en privatisering bij onvoldoende concurrentie. In het eerste geval zouden er belangrijke argumenten voor privatisering zijn, zoals de vrijwaring van beslissingen over investeringen van budgettaire aanslagen en het voorkomen van ongelijke concurrentieverhoudingen tussen publieke en private partijen. In het tweede geval zou dreigend monopolistisch gedrag vooral met mededingingsregelgeving en -toezicht moeten worden tegengegaan. De invloed die hiernaast in een overgangsperiode van corporate governance (overheidsaandeelhouderschap, vertegenwoordiging in RvC) zou kunnen uitgaan, moet niet worden overschat. “*Dit onderstreept (...) de voorkeur om publieke belangen zoveel mogelijk te waarborgen via publiekrechtelijke wegen (wet- en regelgeving; onafhankelijk overheidstoezicht) of via privaatrechtelijke contracten (concessies) waarin afspraken over te behalen prestaties afdwingbaar worden neergelegd.*” (blz. 16)

### 9.2.7 PRIVATISERING NADER BEZIEN; DEELNEMINGENBELEID RIJKSOVERHEID

De vraag naar de wenselijkheid van afstoting van overheidseigendom kwam bij nutsbedrijven, die dikwijls vanaf circa 1900 in overheidshanden waren, pas vrij laat aan de orde, namelijk toen splitsing van dienstverlening en de (verantwoordelijkheid voor de) netwerken mogelijk bleek. Toetreding van nieuwe partijen op

de markt van dienstverleners roept de vraag op naar de wenselijkheid van overheidseigendom van bedrijven die daar opereren, en door de 'oude' vereniging van dienstverlening en zorg voor infrastructuur in één bedrijf, komt dan vanzelf de vraag naar de noodzaak en wenselijkheid van (overheids)eigendom van de netwerken ook aan de orde. Bij aanwezigheid van een natuurlijke monopolie is deze lastiger te beantwoorden dan die naar de eigendom van dienstverlenende bedrijven. Politieke opvattingen en de wettelijke mogelijkheden van aandeelhouders tot sturing, die hier beide van belang zijn, zijn bovendien aan verandering onderhevig.

*Publieke belangen en marktordening* onderscheiden bij de verdere overwegingen tussen privatisering in een concurrerende markt en bij onvoldoende concurrentie. In het eerste geval zouden de voordelen van privatisering zich het meest doen gelden. Genoemd werden (1) prestatieverbeteringen door de rendementsgerichtheid van aandeelhouders en concurrentie op de kapitaalmarkt, en de onmogelijkheid eventuele verliezen op de overheid af te wentelen, (2) *de mogelijkheid om majeure bedrijfsbeslissingen zoals investeringen sneller en dus adequater te nemen en de vrijwaring van investeringen van budgettaire aanslagen*, en (3) het voorkomen van ongelijke concurrentieverhoudingen tussen publieke en private partijen (iets waar vrij kort tevoren een commissie-Cohen – Markt en overheid – had geadviseerd). Verder zouden scherpere regulering en toezicht mogelijk worden, door vermindering van de problematiek van de dubbele petten (overheid als regelgever en als marktpartij). In netwerksectoren waarin (nog) geen noemenswaardige concurrentie mogelijk is, bijvoorbeeld waar het maatschappelijk niet efficiënt is om meer dan één netwerk aan te leggen, gelden de genoemde voordelen, op één belangrijk verschil na: de tucht van de markt werkt (nog) niet waardoor monopolisten minder prikkels hebben om de kosten in de hand te houden, omdat zij deze aan de gebonden afnemers kunnen doorberekenen. Dit is overigens geen kwestie van eigendom, zo wordt terecht opgemerkt, maar van effectief mededingingstoezicht; de ontwikkeling daarvan is essentieel en vraagt tijd, reden om in overgangsfasen terughoudend te zijn met privatisering. Dit betekent niet dat overheidseigendom garanties biedt dat het publieke belang optimaal gediend wordt, aldus de notitie: vooral bij structuurvennootschappen, hetgeen de meeste nutsbedrijven zijn, is de effectiviteit van corporate governance (aandeelhouderschap, vertegenwoordiging in de raad van commissarissen) beperkt (een constatering die sinds wijziging van het Burgerlijk Wetboek in 2004 inmiddels minder opgaat). Dit onderstreept nog eens de wenselijkheid dat publieke belangen langs publiekrechtelijke weg (wetgeving, toezicht) of via privaatrechtelijke contracten waarin afspraken over prestaties afdwingbaar worden, worden vastgelegd.

De discussie rond de privatisering van regionale energiebedrijven bevat naast herhaalde beschouwingen over de merites van uiteenlopende borgingsmethoden van publieke belangen ook enige overwegingen over investeringen.<sup>1</sup> Directe aanleiding tot deze operatie was de wens van verschillende publieke aandeelhouders van regionale productie- en leveringsbedrijven om aandelen van hun ener-

giebedrijven; deze operatie vereiste wijziging van genoemde wetten, omdat deze bepaalden dat aan verzoeken tot privatisering van regionale energiebedrijven die over een netwerk beschikken tot 1 januari 2005 goedkeuring onthouden moest worden (later, bij wetswijziging tot aanscherping van het toezicht is de vaststelling van een datum aan een ministeriële regeling overgelaten). Overwogen werd dat doel van het energiebeleid is dat voor de afnemer energie tegen concurrerende prijzen beschikbaar is en dat er sprake is van betrouwbare energievoorziening. Markt-werking is daarbij geen doel, maar middel. Splitsing van verticaal geïntegreerde bedrijven draagt bij aan eerlijke concurrentie tussen leveranciers en tussen producenten; een noodzakelijke voorwaarde daarbij is dat belangen in het monopolioïde netwerk verweven zijn met commerciële belangen. “Het belang van een vrije netwerktoegang en een hoge netwerkkwaliteit staat op gespannen voet met de commerciële belangen van de geïntegreerde energiebedrijven.” Na splitsing zou volgens de minister, die ook overbrenging van het netbeheer van TenneT tot alle netwerken vanaf 110 kV aankondigde (nodig “gelet op de centrale functie van deze netten bij de waarborging van leveringszekerheid”), ook aan privatisering van de dan dus onafhankelijk beheerde regionale netwerken niet meer in de weg moeten staan.

Van de overwegingen rond de splitsing kunnen de volgende van belang zijn:

- provincies en gemeenten wilden af van hun rol bij het veiligstellen van de publieke belangen op elektriciteits- en gasgebied, omdat zij als aandeelhouders van de energiebedrijven (structuurvennootschappen) geen werkelijke invloed zouden hebben op de bedrijfsvoering van de energiebedrijven, terwijl zij als aandeelhouder wettelijk geen bemoeienis mogen hebben met de taken van de netbeheerder;
- de energiebedrijven hadden als bezwaar tegen splitsing dat hierdoor de aandacht voor innovatie zou afnemen. De minister verwachtte hier eerder het omgekeerde, mits de DTe zou voldoen aan zijn verzoek om in nettarieven voldoende ruimte te bieden voor innovatie en onderzoek;
- de minister baseerde verder zijn verwachting dat investeringen in netwerkkwaliteit groter kunnen worden op het feit dat besluiten daarover in de toekomst geheel onafhankelijk van commerciële belangen genomen worden<sup>2</sup>, terwijl “bovendien het volle leenvermogen dan ten dienste staat van deze voor het publiek belang zo cruciale investeringen”. Ook werd gewezen op het inmiddels in werking getreden wetsvoorstel met additionele waarborgen voor de kwaliteit van het netbeheer (inclusief aanscherping van het toezicht).

Een langlopende reeks relevante stukken verschijnt onder de noemer *Deelnemenbeleid Rijksoverheid* (vanaf een eerste nota onder die titel die werd gepresenteerd in december 2001: Tweede Kamer 28165, nr. 2). Deze stukken verschijnen onder verantwoordelijkheid van de minister van Financiën, die hier het beleid formuleert en bovendien de rijksdeelnemingen beheert. Dit laatste kan uiteraard interessante discussies met vakbewindslieden opleveren. Kennelijk lopen die ook nu, want de voorgenomen evaluatie van de Nota uit 2001 is blijkens recente mededelingen uitgesteld “in verband met de uitgangspunten van het deelnemen-

genbeleid en politieke besluitvorming hieromtrent” (Jaarverslag van het ministerie van Financiën, 31031 IXB, blz. 49).

Een goed overzicht van het denken over de vraag “in welke omstandigheden publiek aandeelhouderschap een bijdrage kan leveren aan de borging van publieke belangen” wordt gegeven in het op 24 augustus aan de Tweede Kamer aangeboden rapport *Publieke belangen en aandeelhouderschap*, dat op verzoek van het kabinet door een interdepartementale werkgroep van het Kenniscentrum voor orderingsvraagstukken was opgesteld.<sup>3</sup> Aanleiding was het feit dat de uitbreiding van de bevoegdheden van aandeelhouders in structuurvennootschappen (oktober 2004) had geleid tot de vraag of het wenselijk is dat deze bevoegdheden gebruikt zouden worden in het kader van de borging van publieke belangen.

Omdat het kabinet al enkele jaren het uitgangspunt hanteert dat publieke belangen het beste geborgd worden door wet- en regelgeving, terwijl desondanks soms het behoud van een meerderheidsaandelenbelang wenselijk wordt gevonden, is de vraag legitiem welke wet- en regelgeving onvoldoende die borgingszekerheid bieden en waar aanvullend aandeelhouderschap nodig is. Het rapport diende, aldus de ministeriële aanbiedingsbrief als bouwsteen voor “de evaluatie die momenteel door het ministerie van Financiën wordt uitgevoerd”. Nu deze evaluatie kennelijk om politieke redenen is vertraagd is nog onduidelijk in hoeverre de conclusies door het kabinet worden gedeeld. Naar het lijkt bieden de tien conclusies over de wenselijkheid en de invulling van publiek aandeelhouderschap vooral een samenvatting van bestaand beleid, zoals de eraan voorafgaande nota bijvoorbeeld, nog eens, de borgingsmodaliteiten en -mechanismen beschrijft. Interessant zijn onder meer de drie actuele motieven voor het aangaan of aanhouden van deelnemingen door de staat:

- verzelfstandiging met het oog op privatisering (bijvoorbeeld PTT),
- aankoop en/of splitsing van netwerken (bijvoorbeeld TenneT),
- financieringsmotief (bijvoorbeeld deelname aan het verzelfstandigde Rotterdamse havenbedrijf met name voor financiering van Maasvlakte 2; Westerscheldetunnel).

Het antwoord op de privatiseringsvraag is in feite het verlengde van het standpunt over de voorkeursmethode tot borging van publieke belangen: is wetgeving/toezicht voldoende, dan geen deelname (meer). In de meeste gevallen zijn wet- en regelgeving voldoende (conclusie 2), en zo niet, dan is publiek aandeelhouderschap slechts een van de alternatieven (conclusie 3); publiek aandeelhouderschap kan een goed instrument zijn om publieke belangen te borgen die niet goed te contracteren zijn, terwijl de ermee verbonden activiteiten wel een commercieel karakter hebben en het BW biedt hiervoor na de wijziging van de structuurregeling meer ruimte (conclusies 4 en 7) of zolang er onzekerheid is over de effecten en stabiliteit van de gekozen marktordering, en de mogelijkheden die het vennootschapsrecht aan het aandeelhouderschap biedt moeten uitsluitend, in voorkomende gevallen, gebruikt worden om niet-contracteerbare publieke belangen te borgen, en overigens puur zakelijk (conclusies 8 en 9).

### 9.3 TRANSPORTDIENSTEN

Tot zover kwamen vooral standpunten van de departementen van Economische Zaken en, in mindere mate, Financiën aan de orde. Ook de ministers van Verkeer en Waterstaat en van Volkshuisvesting, Ruimtelijke Ordening en Milieuhygiëne (drinkwater) hebben bemoeienis met verschillende infrastructuur-gebonden sectoren en infrastructurale voorzieningen.

De minister van Verkeer en Waterstaat gaat – op rijksniveau – over infrastructurale voorzieningen waarlangs in monopolioïde situaties diensten van groot maatschappelijk (economisch of sociaal) belang worden verleend, en over die dienstverlening. Dit geldt voor spoorwegvervoer, voor vormen van openbaar vervoer over de weg, en voor de exploitatie van een mainport als Schiphol. Men kan onderscheiden tussen vervoerdiensten en infrastructuurdiensten, waarnaast hier minder relevante diensten in/op (lucht)havens/stations en het dagelijkse verkeersmanagement worden verricht. Voorts is er de zorg voor infrastructurale voorzieningen waar vooralsnog van exploitatie middels afzonderlijk afrekenbare diensten nauwelijks of geen sprake is, waar de algemene beschikbaarstelling van de voorziening in feite de dienst is, in concreto voor (hoofd)wegen en dijken. Op beide terreinen zijn de termen publiek belang en publieke belangen vanaf 2000 een rol gaan spelen, zij het uiteraard vooral bij de eerste categorie waar liberalisering, privatisering en dergelijke min of meer serieuze opties zijn (geweest).

Een duidelijk voorbeeld van de invloed van het WRR-rapport *Het borgen van publiek belang* wordt geleverd bij de totstandkoming van de Wet personenvervoer 2000, die als voornaamste vernieuwing voorzag in de introductie van concurrentie om de markt van openbaar stads- en streekvervoer, die via concessies zou worden verdeeld. In de memorie van toelichting uit maart 1999 (Tweede Kamer 1998-1999, 26456, nr. 3) ontbreken de publieke belangen nog volledig. Toen evenwel in de Eerste Kamer een oordeel gevraagd werd over de relatie tussen het rapport en het wetsvoorstel, volgde (in de memorie van antwoord van 16 juni 2000, Eerste Kamer 1999-2000, 26456, nr. 228b) een uitvoerige uiteenzetting waaraan het volgende wordt ontleend.

“In het wetsvoorstel gaat het om de introductie van een gereguleerde vorm van marktwerking, waarbij in de concessie de publieke belangen kunnen worden gewaarborgd. Voor het stads- en streekvervoer kunnen als publieke belangen in ieder geval worden beschouwd *voldoende beschikbaarheid van openbaar vervoer, een aanvaardbaar prijsniveau, sociale veiligheid en het voldoen aan toegankelijkheids- en milieu-eisen*. De decentrale overheden kunnen deze belangen in de programma’s van eisen opnemen, in overleg met consumentenorganisaties en andere belanghebbenden. Voorts zijn in het wetsvoorstel de klassieke openbare dienstverplichtingen voor de concessiehouder opgenomen, te weten *de exploitatieplicht, de vervoerplicht en de tariefplicht*. Daarnaast is gewaarborgd dat een *toegankelijk reisinformatiesysteem met landelijke dekking* zal bestaan. Het wetsvoorstel ziet in directe zin niet op privatisering van de overheidsbedrijven, maar privatisering is wel een logisch voortvloeisel van de gekozen systematiek.”

Al sinds 1995 (Nota *Naar een sterker stads- en streekvervoer*, Tweede Kamer 1994-1995, 23645, nr. 3) bestonden plannen om het gebruik en de kostendekkingsgraad van het regionaal openbaar vervoer substantieel te verhogen, en eind 1996 was reeds de kabinetsnota *Marktwerking in het regionaal vervoer* verschenen. De materie was onder meer weerbarstig vanwege de verplichte aanbestedingen die aan concessieverlening vooraf zouden moeten gaan. In de wet, die op 1 januari 2001 in werking trad, werd in verband hiermee voorzien in verschillende vormen van gefaseerde invoering (vooral voor grootstedelijke gebieden met eigen vervoerbedrijven) en evaluatieverplichtingen. Ook de wat- en de hoe-vraag betreffende de publieke belangen kwamen hierbij wederom aan de orde.

Eerste beschouwingen werden (in maart en) augustus 2004 geleverd door de Raad voor Verkeer en Waterstaat in het advies *De waarde van het openbaar vervoer*. In het advies, dat ook op de spoorlijnen betrekking had, werden niet minder dan elf publieke belangen, in drie clusters, onderscheiden, die door de minister van Verkeer en Waterstaat in een eerste reactie als volgt werden samengevat (brief van 1 september 2004, Tweede Kamer 2003-2004, 23645, nr. 75).

A *Bijdrage aan ruimtelijke en economische ontwikkeling*

- 1 Investerings in OV-lijnen, zoals tram-, metro- en spoorlijnen, ter ondersteuning van nieuwe ruimtelijke en economische ontwikkelingen.
- 2 De vervoerscapaciteit in stedelijk gebied tijdens de spits.

B *Maatschappelijke deelname en betrokkenheid*

- 3 De verbinding van kleinere plaatsen met steden voor woon-werkverkeer.
- 4 Aanwezigheid van stedelijk openbaar vervoer in de stillere uren.
- 5 Bereikbaarheid van werk, school, ziekenhuis en culturele voorzieningen voor mensen op het platteland en buiten de spits.
- 6 Toegankelijkheid en bereikbaarheid van het OV voor minder validen.
- 7 Betaalbaarheid voor minder draagkrachtige groepen.

C *Leefbaarheid en verkeersveiligheid*

- 8 Stedelijk milieu en daarmee de leefbaarheid van wijken.
- 9 Luchtvervuiling en verkeershinder nabij snelwegen buiten de randstad.
- 10 Technische innovatie in de bussector, met name de toepassing van schonere motoren.
- 11 Verkeersveiligheid (als gevolg van een toename van onveiligere auto- en brommergebruik).

De minister tekende in haar brief aan dat het rapport weinig inhoudelijke aanknopingspunten biedt voor de afweging in welke situatie en in welke mate welk publiek belang prioriteit heeft. Een andere kanttekening die gemaakt kan worden is de sterke uitbreiding van de publieke belangen die nu niet meer alleen betrekking hebben op de kwaliteit van de dienst voor de gebruikers, de randvoorwaarden waaronder de productie/levering plaatsvindt en de manier waarop de marktwerking functioneert; publieke belangen zijn nu alle algemene, maatschappelijke belangen die profijt zouden kunnen hebben van het openbaar vervoer. Dit geldt vooral duidelijk voor de punten 8-11, die ook moeilijk in concessievoorwaarden zijn neer te leggen; de andere punten komen overeen met de opsom-

ming die ruim een jaar later ook in de *Nota Mobiliteit* werd gegeven, zij het dat deze een kortere, samenvattende versie bevat (Tweede Kamer 2004-2005, 29644, nr. 13, blz. 54).

De hoe-vraag kwam in het bijzonder aan de orde in een tweetal, voorgeschreven, wetsevaluaties, eind 2004 van de aanbestedingen in het stads- en streekvervoer en eind 2005 van de hele wet (Tweede Kamer 2004-2005, 23645, nr. 82, respectievelijk 2005-2006, 30421, nr. 1). In de eerste notitie wordt (de wat-vraag) nog eens de centrale plaats van klant- en vraaggerichtheid van het OV volgens de *Nota Mobiliteit* genoemd, naast de doelmatigheid in de besteding van overheidsmiddelen en efficiency in de uitvoering van het vervoer; in verstedelijkte gebieden en bij 'dikke vervoerstromen' wordt groei geambieerd, in landelijke gebieden moet een gericht aanbod de sociale functie waarborgen. De beheerste en gefaseerde introductie van marktwerking waarin de WP2000 voor het regionaal openbaar voorziet, functioneert naar behoren, en brengt de twee hoofddoelstellingen van de wet naderbij, aldus nog steeds de eerste evaluatie.

De tweede evaluatie benadrukt de taakverdeling in de wet: bij de nationale overheid ligt de nadruk op het op hoofdlijnen ordenen van de markt en het borgen van (niet gespecificeerde) nationale publieke belangen en eerlijke mededinging, terwijl de decentrale overheden via de concessies en bijbehorende aanbestedingen de overige publieke belangen borgen. Door daarbij optimaal gebruik te maken van wat de markt te bieden heeft "wordt een balans gevonden tussen het publieke belang aan de ene kant en innovatie en efficiency vanuit de markt aan de andere kant". De instrumenten van de centrale overheid, wet en een enkele aanwijzing, zouden iets duidelijker sommige publieke belangen kunnen betreffen dan nu, in het bijzonder de inspraak van de reiziger die geen keuze heeft, en zaken als kaartintegratie en milieuvriendelijk, toegankelijk en veilig openbaar vervoer. De verplichte aanbesteding als instrument voor marktwerking zou volgens plan moeten worden doorgevoerd, voor streekvervoer per 1 januari 2007, en in de vier grote steden voor bus per 1 januari 2009 en voor tram en metro per 1 januari 2017. Alles leek hiermee bevredigend geregeld, maar het al veel langer lopende verzet van de grote steden die hun eigen OV-bedrijven willen handhaven heeft het kabinet begin september 2007, naar aanleiding van een motie-Roefs, doen besluiten de aanbestedingsplicht op te schorten; dit ondanks verzet van de verantwoordelijke staatssecretaris, mede vanwege Europese verplichtingen.

De invloed van de politiek is even duidelijk waar het de voorgenomen privatisering van de luchthaven Schiphol, of preciezer, de gedeeltelijke vervreemding van de staatsaandelen in de NV Luchthaven Schiphol (NVLS), betreft. Al in 1995 werd het kabinet bij motie uitgenodigd om de opportuniteit hiervan te onderzoeken, waarna in 1997, na vooral onderzoek naar de monopoliepositie ten aanzien van gebruikers en in het bijzonder Nederlandse luchtvaartmaatschappijen, een positief principebesluit werd genomen. Een eerste analyse in termen van publieke belangen werd geleverd (Tweede Kamer 2000-2001, 25435, nr. 2). Geconstateerd werd dat de overheidsrol van regelgever en toezichthouder steeds nadrukkelijker

spanning oproept met de rol van aandeelhouder, terwijl de aandeelhoudersbevoegdheden geen functie hebben als het om de bescherming van publieke belangen gaat. Vervolgens werden drie (categorieën) publieke belangen onderscheiden. De publieke belangen gemoeid met milieu, veiligheid en volksgezondheid zouden beter worden gewaarborgd via het aangekondigde luchthavenindelingsbesluit en luchthavenverkeersbesluit op grond van de (nog in ontwerp aanhangige) Wet Luchtvaart.

Het publieke belang van de continuïteit van Schiphol als mainport, “een essentiële infrastructurele voorziening voor de internationale bereikbaarheid van Nederland door de lucht”, zal vooral worden gewaarborgd via de (intrekkingsmogelijkheid van de) nieuwe luchthaven exploitatievergunning. Het publieke belang ten slotte, van efficiënte marktwerking en een doelmatig toezicht zou vooral via tarieftoezicht ten behoeve van gebonden gebruikers – te realiseren door NMa-toezicht te introduceren – en door een consultatie- en publicatieplicht op te leggen met betrekking tot de luchthaventarieven voor start-, landings- en parkeergelden gewaarborgd worden. Kort hierna bleek dat de Tweede Kamer geen wijziging op het voorstel voor de Wet Luchtvaart accepteerde, maar een afzonderlijk wetsvoorstel wenste. Dit voorstel (Tweede Kamer 2001-2002, 28074) had het oog op de gewenste rechtszekerheid voor de exploitant en het publiek belang bij continuïteit van de luchthaven. In een korte tijd later gepubliceerde notitie (Tweede Kamer 28074, nr. 6) werd uitdrukkelijk verwezen naar de eerdergenoemde ‘netwerknootie’ (Tweede Kamer 27018, nr. 1). Voor de benoeming van publieke belangen leverde dit weinig nieuws op, maar de waarborging werd verduidelijkt. In de meeste gevallen bleek te kunnen worden voldaan aan het streven om op de publieke belangen te sturen via publieke regelgeving. Het belang dat de meeste zorgen baarde, de continuïteit, leek door een samenstel van uitdrukkelijk als additioneel gepresenteerde instrumenten (de intrekbare exploitatievergunning, het nationaliseren van de grond, het monitoren van indicaties inzake de mainportdoelstelling en de aanwijzingsbevoegdheid) voldoende gewaarborgd. In juli 2004 werd in de ministerraad het principebesluit genomen om “bij een adequate borging van publieke belangen op een financieel opportuun moment een minderheidsbelang in de NV Luchthaven Schiphol te vervreemden”. Na een aantal, ook externe, evaluaties werd het instrumentarium verder aangescherpt (Tweede Nota van Wijziging, Tweede Kamer 2004-2005, 28074, nr. 9) door de invoering van kwaliteits- en capaciteitsindicatoren voor het ministeriële toezicht. Om twijfel uit te sluiten werd niettemin bij amendement in het wetsvoorstel vastgelegd dat de overheid ten minste 51% van de aandelen in de NVLS zou behouden. Vooral verzet van de minderheidsaandeelhouder Amsterdam vertraagde de daadwerkelijke verkoop van aandelen, die na de inwerkingtreding van de wet in juli 2006 mogelijk was geworden. Het regeerakkoord van het kabinet-Balkenende IV bevatte begin 2007 de mededeling dat de aandelen Schiphol niet naar de beurs zouden worden gebracht. De financiële drijfveren waren overigens ongewijzigd: “Het kabinet start overleg met de luchthaven Schiphol en de gemeente Amsterdam om op een andere manier middelen vrij te maken uit het overheidsaandeel zonder afstand te doen van de zeggenschap en de mogelijkhe-

den voor Schiphol om vreemd vermogen aan te trekken. De extra opbrengsten uit het overheidsaandeel in Schiphol zullen bij voorrang worden aangewend voor ontsluiting van de Noordvleugel. Ultimo 2007 zal een definitief besluit worden genomen.” Al op 12 oktober 2007 werd, door de minister van Financiën, bekendgemaakt dat definitief van privatisering werd afgezien, en dat was gebleken dat ook voor onderhandse plaatsing van een minderheid van de aandelen geen meerderheid bestond. Het bedoelde alternatief van een superdividend zou nog met de directie van de NVLS besproken worden.

Het eerdergenoemde advies van de raad voor Verkeer en Waterstaat *De waarde van het openbaar vervoer* uit november 2004, met zijn opsomming van publieke belangen, was een gevraagde uitwerking van een spontaan advies van deze raad uit maart van hetzelfde jaar, getiteld *Hoezo marktwerking...?* Doel van dit advies was om concrete beleidsadviezen te bieden voor politieke besluitvorming inzake marktordening en het borgen van publieke belangen bij vitale transportinfrastructuur. Een opvallend element in het rapport was de erin verwoorde opvattingen over voorafgaande explicitering en prioritering van publieke belangen. Vooral het laatste element levert een meerwaarde ten opzichte van bijvoorbeeld *Het borgen van publiek belang*. Publieke belangen die moeten worden geborgd zouden zo concreet en meetbaar mogelijk geformuleerd moeten worden en wel per sector en afzonderlijke stap in het veranderingsproces (i.e. bij introductie van marktwerking, privatisering, enzovoort). Als niet duidelijk is wat het kernprobleem is en wat de concrete doelen en randvoorwaarden zijn in termen van publieke belangen, dan zal het beleid al snel ‘zwabberen’ waardoor uitvoerders ruimte krijgen hun eigen, wellicht met het publieke belang strijdige, lijn te trekken.<sup>4</sup> *Expliciete prioriteitenstelling* wordt volgens de raad vereist door onderlinge tegenstrijdigheden en spanning die onvermijdelijk tussen de diverse publieke belangen bestaan. Investerings ter verhoging van de veiligheid bijvoorbeeld zullen ten koste gaan van de betaalbaarheid voor de mobilist/ reiziger of belastingbetaler, terwijl het in beide gevallen om een publiek belang gaat. Het gaat om spanningen tussen enerzijds publieke belangen die de *individuele gebruiker* centraal stellen, zoals betaalbaarheid, betrouwbaarheid, bereikbaarheid, en anderzijds publieke belangen die het collectief van de Nederlandse samenleving als vertrekpunt nemen. Bij die laatste onderscheidt de raad dan algemene *maatschappelijke belangen*, zoals duurzaamheid en veiligheid, en collectieve *belangen die de marktpositie van de ondernemingen in de sector betreffen*, zoals continuïteit, economisch prestatievermogen, concurrentiekracht, ‘level playing field’ en inkomsten voor de schatkist.

Deze drie hoofdcategorieën kunnen niet alle in gelijke mate en tegelijkertijd worden gediend; het gaat in concrete situaties om concrete afwegingen, aldus nog steeds de Raad voor Verkeer en Waterstaat, die zich, enigszins teleurstellend verder beperkt tot het advies om de explicitering en onderlinge weging onderwerp van, niet alleen intern-politiek, debat te maken.<sup>5</sup> In combinatie met de positieve ontvangst door de betrokken bewindslieden, verklaart dit de vervolgoedpracht.

De adviezen van de Raad voor Verkeer en Waterstaat uit 2004 hadden ook betrekking op de spoorwegsector, waar al sinds begin van de jaren negentig, later ook gestimuleerd door Europese regels, aan vormen van marktwerking, privatisering en verzelfstandiging wordt gedacht en gewerkt. Als de aandacht wordt beperkt tot het hoofdrailnet, dan blijkt dat het personenvervoer sinds 1 januari 2005 eveneens plaatsvindt conform regels van de Wet Personenvervoer 2000; de publieke belangen die eerder werden geïdentificeerd voor het openbaar vervoer in het algemeen hebben ook hier hun betekenis, en het voornaamste vehikel om ze te borgen is ook hier de concessie waarin zij in voorwaarden zijn uitgewerkt. Belangrijk verschil is dat deze, conform de wet (art. 69d) tot 2015 aan de NV Nederlandse Spoorwegen is verleend (overigens met de mogelijkheid om hierop terug te komen).

Overigens, in het bijzonder waar het de aanleg, het onderhoud en het beheer betreft, is het de, op dezelfde datum in werking getreden, nieuwe Spoorwegwet die het regime voor de hoofdspoorweginfrastructuur bevat. In de memorie van toelichting op het wetsvoorstel (Tweede Kamer 2000-2001, 27482, nr. 3) uit november 2000 had de term publiek belang nog weinig ingang gevonden; het bleef erbij dat aanleg en beheer van de spoorweginfrastructuur werden aangemerkt als publieke *taken* en dat de veiligheid van het spoorverkeer zou gaan boven het publieke belang dat gemoeid is met het verrichten van vervoersdiensten. Het wetsvoorstel heeft tussentijds verschillende wijzigingen ondergaan, waarvan de vierde nota van wijziging (Tweede Kamer 27482, nr. 13, 2001-2002) in dit verband onder meer interessant is vanwege de invoering van 'publieke belangen' in de considerans: "(...) de verantwoordelijkheid van de overheid voor de aanleg van spoorweginfrastructuur vast te leggen, de verantwoordelijkheid voor vervoer en spoorweginfrastructuur te scheiden en de publieke belangen die gemoeid zijn met het beheer van spoorweginfrastructuur te verzekeren door de invoering van een concessiestelsel voor het beheer." De aanvankelijk voorgestelde 'Spoorwegbeheersorganisatie', een zelfstandig bestuursorgaan met een publieke gezagsverhouding tot de spoorweg(vervoer)ondernemingen, werd vervangen door een systeem van verlening van concessie(s) voor het beheer van de hoofdspoorweginfrastructuur door de minister. De houder van de concessie (de beheerder) is "in beginsel een onderneming die dienstbaar aan het publiek belang" (Tweede Kamer 2001-2002, 27482, nr. 13, 23).

De nota van wijziging spreekt van het primaire of uiteindelijke publieke belang dat met de spoorwegen gemoeid is, namelijk de kwaliteit van het spoorvervoer/goed vervoer voor reiziger en verlader. Reden voor een concessiesysteem, zoals al voor het personenvervoer was voorgesteld was onder meer dat "bij nader inzien vervoer en infrastructuur wellicht niet geheel onvergelijkbaar zijn als elementen van een sector die als geheel een publiek belang dient". Bovendien moesten uiterlijk maart 2003 twee nieuwe Europese richtlijnen verwerkt zijn, die onder meer de posities van overheid, beheerder(s) en vervoerder(s) voorschreven vanuit het uitgangspunt van non-discriminatoire toegang voor goederen- en internationaal reizigersvervoer. In de praktijk is de concessie voor een

periode van tien jaar, tot 2015, verleend aan ProRail BV, een bedrijf met als houderstermaatschappij Railinfratrust die de staat als enige aandeelhouder heeft.

De publieke belangen waar het nu om gaat zijn in eerste instantie af te leiden uit de (globale) wettelijke omschrijving van het begrip beheer, dat volgens artikel 16, eerste lid van de Spoorwegwet de zorg omvat voor (a) de kwaliteit, betrouwbaarheid en beschikbaarheid van de infrastructuur, (b) een eerlijk, niet-discriminatoire verdeling van de capaciteit van de infrastructuur, en (c) het leiden van het verkeer over de infrastructuur. Verder bepaalt de wet (art. 17) dat aan de concessie prestatie-indicatoren worden verbonden om onder meer te waarborgen dat de infrastructuur in goede staat verkeert en doelmatig en veilig bereden kan worden; ook zijn voorschriften verplicht over de tarieven die aan derden worden berekend over gegevensverschaffing ten behoeve van het toezicht op omgevingslawaaï en de opstelling van financiële verantwoording. De concessie biedt de uitwerking en aanvulling, onder meer door invoering van een beheerplan. Een korte weergave voert hier te ver; waar het om gaat is dat de diverse voorschriften impliciet de betrokken publieke belangen aangeven. Die belangen betreffen kwaliteit (inclusief veiligheid) en kwantiteit van het product en de (eerlijke, behoorlijk geprijsde) toegang ervan, en goede controle op de nakoming (verantwoordings- en informatieplichten). Die controle gebeurt in hoofdzaak vanwege de minister; de NMa ziet toe op naleving van (Europese) mededingingsregels (toegangverlening, tarieven). Volledigheidshalve: niet alle verplichtingen van de beheerder zijn opgenomen in de concessie; verschillende wettelijke bepalingen, Koninklijke Besluiten en hierop gebaseerde ministeriële regelingen bevatten eveneens eisen op het terrein van capaciteitsverdeling, kwaliteit, etcetera.

#### 9.4 INFRASTRUCTUUR

Tot zover bleek dat de publieke belangen vrijwel uitsluitend geformuleerd werden in termen die de te leveren diensten betreffen. Leveringszekerheid, betrouwbaarheid, toegankelijkheid, betaalbaarheid en dergelijke zijn kwalificaties die eerst en vooral betrekking hebben op de diensten die aan het publiek geleverd worden. In die zin geldt algemeen wat eerder over het openbaar vervoer werd geciteerd: *het gaat om het totale product*. Eisen die aan de infrastructuur worden gesteld zijn dan uiteindelijk een afgeleide van de algemene eisen: de infrastructuur moet het mogelijk maken dat de algemeen geformuleerde publieke belangen worden gerealiseerd/geborgd. Dit betekent bijvoorbeeld dat de toegang tot de infrastructuur voor alle leveranciers van diensten onder dezelfde voorwaarden plaatsvindt, hetgeen onafhankelijk beheer, toezicht op tarieven en dergelijke kan impliceren. Het zal ook betekenen dat de infrastructuur kwantitatief en kwalitatief (betrouwbaarheid, veiligheid) aan de maat moet zijn.

Voor de *elektriciteitssector* zijn de verplichtingen uit de laatste categorie wettelijk vastgelegd als taken en verplichtingen van de netbeheerder(s), waarvan deel uitmaken (artikel 16, eerste lid, Elektriciteitswet 1998, onder a, c en d) de plicht om:

- “de door hem beheerde netten in werking te hebben en te onderhouden”,
- “de netten aan te leggen, te herstellen, te vernieuwen of uit te breiden (...) en
- “voldoende reservecapaciteit voor het transport van elektriciteit aan te houden”.

Als via de diverse formele toezichtmechanismen of anderszins blijkt dat de transportmogelijkheden kwalitatief of kwantitatief tekort schieten kan de minister van Economische Zaken opdracht geven de nodige voorzieningen te treffen, en zo nodig aansluitend bestuursdwang toe te passen (art. 22). Zoals eerder opgemerkt waren bij de voorbereiding van deze bepalingen de termen publiek belang en publieke belangen in deze context nog onbekend. In de bijdrage van Theon van Dijk in deze Verkenning wordt duidelijk gemaakt hoe deze verplichtingen en waarborgen in de praktijk functioneren.

In de *drinkwatersector* zijn herzieningen in voorbereiding. Pas in recente regelgeving en nieuwe wetgeving in voorbereiding spelen publieke belangen met zoveel woorden een rol. Voorts blijkt dat ook hier de infrastructuur als belangrijk element bij de voorziening van het eindproduct ‘goed drinkwater’ wordt gezien; dit betekent dat ook enige aandacht nodig is voor het systeem als geheel. De Waterleidingwet uit 1957 regelt de organisatie van de openbare drinkwatervoorziening en het toezicht op de waterleidingbedrijven. Kenmerkend zijn hier de regionale monopolies van bedrijven in overheidshanden. In de tweede helft van de jaren negentig is sprake geweest van plannen tot invoering van marktwerking middels privatisering, maar op aandrang uit de Tweede Kamer is er in 1999 voor gekozen het publieke karakter van de openbare watervoorziening te handhaven, met waarborgen voor zowel de kwaliteit van de drinkwatervoorziening als de doelmatigheid van waterleidingbedrijven (Tweede Kamer, 25869, nrs. 1, 2 en 4). Aansluitend werd de koppeling van het monopolie en het overheidseigendom in de wet vastgelegd (wet van 9 september 2004, Stb. 517). Het is in de memorie van toelichting bij dit wetsvoorstel dat publieke belangen voor de eerste maal in Kamerstukken voor komen, zij het in hoofdzaak via verwijzing naar de eerdergenoemde nota *Publieke belangen en marktordening*. Verwezen wordt naar de vaststelling in die nota “dat als duplicatie van de infrastructuur niet mogelijk is en concurrentie op de infrastructuur moeilijk te organiseren is, periodieke aanbesteding van exploitatieconcessies een optie kan zijn: concurrentie om de markt. De infrastructuur blijft hierbij in handen van de overheid. Vanwege de sterke verwevenheid van eigendom, beheer en exploitatie van de infrastructuur in de watersector heeft het kabinet echter niet gekozen voor splitsing tussen eigendom en exploitatie.” (Tweede Kamer 2001-2002, 28339, nr. 3, 2-3). Later in de toelichting (blz. 10) is nog sprake van “het publieke belang van het waarborgen van een goede drinkwatervoorziening”, maar daar blijft het bij.

Uitvoeriger komen publieke belangen aan de orde bij het voorstel voor een Drinkwaterwet, die de Waterleidingwet moet vervangen (Tweede Kamer 2006-2007, 30895, vanaf december 2006). Dit wetsvoorstel biedt, naar eigen zeggen, vooral een modernisering van de vijftig jaar oude geldende wet, en daarnaast

verankering in de wet van twee onderwerpen die al langer aandacht hebben, leveringszekerheid en prestatievergelijking (de nu al vrijwillig ingevoerde *benchmarking*). De in het geding zijnde publieke belangen worden in de toelichting nu uitgesplitst in “de continuïteit van de drinkwatervoorziening, optimale kwaliteit van het drinkwater, toegankelijkheid, doelmatigheid, een duurzame wijze van produceren en regionale inpassing in verband met bijvoorbeeld ruimtelijke ordening en grondwaterbeheer” (Tweede Kamer 2001-2002, 30895, nr. 3, 27).

De opsomming houdt, zo lijkt het, vooral verband met de noodzaak duidelijk te maken dat er geen strijd bestaat met Europese regels inzake mededinging en vrij verkeer van kapitaal. Gesteld wordt dat de drinkwatervoorziening in Nederland als een ‘dienst van algemeen belang’ is aan te merken, waardoor de wijze waarop de dienst is georganiseerd en gefinancierd in beginsel tot de bevoegdheden van de staat behoort; voorst wordt voldaan aan de eisen voor de keuze voor volledige zeggenschap, die erop neerkomen dat de beperking (van het kapitaalverkeer) gerechtvaardigd moet zijn om dwingende redenen van algemeen belang, niet discriminerend en geschikt en evenredig voor het bereiken van het beoogde doel.

De geformuleerde publieke belangen hebben uiteraard ook daadwerkelijk betekenis voor de gekozen organisatievorm. Tegenover, of zo men wil naast, het regionale monopolie en de overheidseigendom staan allerlei voorzieningen die de leveringszekerheid en kwaliteit moeten waarborgen en de doelmatigheid moeten verzekeren. Algemene voorschriften, plannen en vormen van toezicht zijn hierbij de traditionele middelen om de kwaliteit te verzekeren; invloed op de tarieven die op dekking van de kosten (inclusief vermogenskosten ten behoeve van investeringen en een vergoeding voor vermogensverschaffers, Tweede Kamer 2006-2007, 30895, nr. 9, blz. 6 gebaseerd moeten zijn, moeten efficiëntie verzekeren. Afdoende investeringen in infrastructuur moeten primair verzekerd worden door de wettelijke taak van de eigenaar van “het tot stand brengen en in stand houden van de infrastructuur die noodzakelijk is voor de productie en distributie van drinkwater” (artikel 7, eerste lid, onder b). Hoezeer men hierbij overheids-eigendom van de bedrijven van belang acht blijkt nog eens uit de herhaaldelijk geformuleerde vrees dat particuliere aandeelhouders voor winstmaximalisatie zouden kiezen en aldus tot onvoldoende investeringen zouden overgaan (Tweede Kamer 2001-2002, 30895, nr. 3, blz. 28 en 48).

De risico's van marktwerking, die al waren opgesomd in de instemmende reactie op de vermelde bezwaren van de Kamer uit 1999, werden herhaald door de mededeling dat gezocht zou worden “naar een zodanige invulling dat ongewenste effecten (zoals kruissubsidiëring, kapitaalvernietiging door verminderde afzet, verminderde aandacht voor maatschappelijke taken en belemmering van samenwerking in de waterketen) worden ondervangen” (Tweede Kamer 2001-2002, 30895, nr. 3, blz. 3). Of de nieuwe wet ook de soms bekritiseerde ‘goudgerande investeringen’ door overheidsbedrijven, of juist het uitkeren van hoge dividenden aan de overheidsaandeelhouders, zal tegenhouden moet uiteraard nog worden afgewacht.

Voor de *hoofdspoorweginfrastructuur* bepaalt artikel 2 van de Spoorwegwet dat de minister van Verkeer en Waterstaat zorg draagt voor de aanleg, het beheer en het onderhoud. Aanvankelijk werd hier slechts de aanleg vermeld om deze te onderscheiden van de beheerfunctie; als motieven werden aangevoerd de maatschappelijke consequenties van aanleg van infrastructuur, het beleidsmatige, niet uitvoerende karakter van de ermee gepaard gaande afwegingen, de verwevenheid met vraagstukken van ruimtelijke ordening en de bekostiging uit publieke middelen (Tweede Kamer 2001-2002, 27482, nr. 13, 22). Beheer en onderhoud zijn ingevoegd bij amendement(-Hofstra; Tweede Kamer 2001-2002, 27482, nr. 66). Er is aldus een soort eindverantwoordelijkheid van de minister gecreëerd, boven de operationele verantwoordelijkheid van de beheerder.

Deze laatste verantwoordelijkheid gaat vrij ver, getuige de omschrijving van het onderdeel “zorg voor de kwaliteit, betrouwbaarheid en beschikbaarheid” (van de hoofdspoorweg-infrastructuur) die mede omvat “het voorbereiden en uitvoeren van de uitbreiding (...) die een nauwe samenhang heeft met de bestaande hoofdspoorweginfrastructuur” (art. 2 Concessie). Volgens de toelichting bij de concessie kan hierbij bijvoorbeeld worden gedacht aan een spoorverdubbeling. “ProRail kan voor dergelijke projecten subsidieaanvragen indienen op grond van het Besluit Infrastructuurfonds.”

De aanleg van volledig nieuwe (grote) spoorwegverbindingen is exclusief een zaak van de minister, zo men wil van de staat. Van wettelijke normen en toezicht is hier, anders dan bijvoorbeeld in de sectoren elektriciteit of drinkwater, geen sprake; alleen langs politieke weg kan actie worden afgedwongen. De besluitvorming over nieuwe spoorweginfrastructuur loopt langs lijnen die, in elk geval formeel, sterk overeenkomen met de besluitvorming omtrent wegen en, in mindere mate dijken. Het onderwerp blijft hier verder rusten, met name ook omdat de aanleg van nieuwe spoorlijnen een zeldzaamheid is. Het is ook geen toeval dat voor de twee laatste grote verbindingen, de HSL-zuid en de Betuwelijn, afzonderlijke beheersconcessies zijn verleend.

Bij aanleg, beheer, onderhoud en exploitatie van *dijken en wegen* is van structurele veranderingen in de zin van liberalisering of privatisering geen sprake. Een eenvoudige verklaring ligt in het feit dat, een enkele tunnel daargelaten, afzonderlijke afrekening van diensten ontbreekt. Weliswaar worden langs wegen en spoorwegen tal van betaalde transportactiviteiten uitgevoerd, maar dit gebeurt niet door de verantwoordelijke wegbeheerder; een directe relatie tussen investeringsbeslissingen en financiële opbrengsten ontbreekt. De gedachte dat afrekening per gebruik, zonder grote hinder, technisch ook niet mogelijk zou zijn is inmiddels voor wegen achterhaald, maar zolang een dergelijk systeem nog niet is ingevoerd blijft de status-quo gehandhaafd. Dit laatste geldt nog veel sterker voor dijken: de consequenties van waterveiligheid op maat zijn nauwelijks te overzien. Het feit dat water dat op dijken stuit elders moet worden opgevangen, de inbreuk op de traditionele solidariteitsgedachte en de ruimtelijke en landschappelijke consequenties zullen tezamen dijken/waterveiligheid nog lang als een

collectief goed doen voortbestaan. De ruimtelijke inpassing en de samenhang binnen het systeem, in casu het wegensysteem, maken dat zelfs bij vergaande kilometerbeprijzing, ook bij wegen de overheid een belangrijke eindverantwoordelijkheid zal houden (*Anders betalen voor mobiliteit 2005*).

Het ontbreken van een directe relatie met dienstverlening betekent dat een ander soort belang centraal staat: niet zaken als toegankelijkheid of betaalbaarheid (van dienstverlening), maar doorstroming en verkeersveiligheid (bij wegen) zijn de zaken waar het primair om gaat. Het feit dat de overheid volledig verantwoordelijk is brengt met zich mee dat de term publiek(e) belang(en) waarmee elders wordt aangeduid waarvoor de overheid zich sterk blijft maken, vrijwel niet gebruikt wordt. Slechts daar waar bij de voor de uitvoering van werkzaamheden particuliere bedrijven worden ingeschakeld heeft het begrip, zoals zal blijken, enige ingang gevonden.

De centrale rol van de overheid betekent niet dat het publiek belang, of beter het algemeen belang geen rol zou spelen. Integendeel, het is uiteraard in haar rol als hoedster van het algemeen belang dat de overheid wegen en dijken aanlegt. Bij de vraag waar en wanneer welke voorziening zal worden getroffen, kan niet het directe economische rendement bepalend zijn maar wordt een veelheid aan belangen die de overheid zich aantrekt in de overwegingen meegenomen.<sup>6</sup> In beperkte mate vloeien verplichtingen uit wettelijke verantwoordelijkheden voort, voor dijken uit de Wet op de waterkering en voor wegen, maar alleen op het punt van onderhoud, uit de Wegenwet. Voorts zijn er de talloze procedurele en inhoudelijke randvoorwaarden waarvoor elke ruimtelijke ingreep aan moet worden voldaan; de uiterst gecompliceerde besluitvorming die zich langs verschillende lijnen afspeelt moet hier verder buiten beschouwing blijven. Voor de beleidsmatige, inhoudelijke afwegingen is vooral de *maatschappelijke kosten-batenanalyse* een belangrijk hulpmiddel. Met deze analyse, die in verschillende varianten wordt gebruikt, worden in beginsel alle effecten van een project in geld uitgedrukt en gesaldeerd, zodat het nut min of meer objectief kan worden bepaald; ook vergelijkingen tussen alternatieve projecten en varianten is zo beter mogelijk. Er valt te discussiëren over de vraag of de keuze, vertaling en weging van belangen de best denkbare zijn – en Van Duijn doet dat ook in zijn bijdrage in deze Verkenning –, maar de maatschappelijke kosten-batenanalyse blijft een hulpmiddel: als ‘de politiek’ iets juist wel of toch niet wil, dan is dat wat gebeurt.

Zoals opgemerkt wordt de term publiek belang of publieke belangen bij wegen en dijken spaarzaam gebruikt, vanwege de beperkte rol van marktpartijen. Een van de weinige voorbeelden vormt de Westerscheldetunnel en in het bijzonder de plannen van de vorige minister van Financiën, besproken in het kader van het overheidsdeelnemingenbeleid, om het rijksaandeel in de exploitatievennootschap te vervreemden. Wellicht belangrijker zijn de ontwikkelingen op het vlak van publiek-private samenwerking, waarbij de verantwoordelijkheden van de private partners worden uitgebreid. De traditionele ‘aanbesteding op bestek’ wordt in toenemende mate verdrongen door ‘innovatief aanbesteden’, waarbij

het, in elk geval op papier, gaat om allerlei combinaties van ontwerpen, bouwen, financieren, onderhouden en exploiteren, naar de beginletters van de Engelse benaming aangeduid als DBFMO. Vooral als voor langere tijd risico's worden overgedragen vragen publieke belangen, dan ook onder die naam, speciale aandacht.

## 9.5 DE VASTSTELLING VAN HET PUBLIEKE BELANG

Zoals opgemerkt liet *Het borgen van publiek belang* de beantwoording van de vraag *wat* het publiek belang was, *wat* de publieke belangen waren aan de politiek over. De notitie *Privatisering en liberalisering van netwerksectoren; publieke belangen en marktordening* bijvoorbeeld, benoemt, zoals bleek, inderdaad zonder veel omwegen deze belangen voor de betrokken sectoren. De reden voor de terughoudende opstelling van de WRR was vooral de wens om de aandacht toe te spitsen op de meer 'technische' vraag van optimale borging; ook langs deze indirecte weg kon vergaande terugtred van de overheid worden doorgelicht. Dat de beantwoording van de wat-vraag volgens anderen wel degelijk langs wetenschappelijke weg kan plaatsvinden was de WRR overigens niet ontgaan. Zo worden op bladzijde 48 van het rapport de bestuurskundige theorieën over overheidsfalen, met name de (bestuurskundige) *public choice theory*, bestreden: zij geven wel aan dát situaties van overheidsfalen zich kunnen voordoen, maar niet wanneer zo'n situatie zich werkelijk voordoet. Er zal dus een politieke afweging gemaakt moeten worden: "is de behartiging van maatschappelijke belangen zo ernstig dat (enige) twijfel over de mogelijkheden van de overheid moet worden geaccepteerd? Of kan de overheid in het onderhavige geval beter van een eindverantwoordelijkheid afzien?" (WRR, 2000)

Een interessante wetenschappelijke benadering, maar vooral gericht op de hoe-vraag, is die van de *institutionele economie*: men ziet bijvoorbeeld de principaal-agententheorie als analysekader voor privatisering, uitbesteding en prestatiecontracten.

De belangrijkste kritiek op de benadering van de WRR komt echter uit de hoek van de *welvaartseconomie*, in dit geval in het bijzonder de economen Teulings, Bovenberg en Van Dalen, die in *De calculus van het publiek belang* (2003) de doorslaggevende rol van economische overwegingen bij de vaststelling van de overheidstaak, van het publiek belang, benadrukten; de twee eersten hadden dit standpunt ook al ingebracht bij de voorbereiding van het hiervoor genoemde WRR-rapport. Kort gezegd zou er sprake zijn van een publiek belang in het geval van een *complex extern effect*, dat wil zeggen een *extern effect* dat *free-rider gedrag* (profiteren zonder bij te dragen) oproept dat slechts met behulp van publiekrechtelijke dwang is in te dammen. Een extern effect ontstaat als door een actie van één partij of een transactie tussen meer partijen gevolgen ontstaan voor niet rechtstreeks bij die (trans)actie betrokken derden. Om daadwerkelijk op te treden is het van belang dat de kosten van overheidsop treden de opbrengsten ervan niet te boven gaan (en er dus geen sprake is van 'overheidsfalen'). Op basis van het uitgangspunt van de externe effecten wordt door de auteurs onder meer een afwegingsschema voor

het management van publieke belangen aangegeven, waarin (overigens zonder gebruik van die termen) ook marktordening en borgingmechanismen zijn opgenomen. Aan het slot van hun betoog relativieren de auteurs het dwingende karakter van hun redeneringen, getuige het volgende citaat.

“Twee hoofdvragen zijn te allen tijde van belang: (1) wanneer is er sprake van een publiek belang? En (2) Is dit zogenaamde publieke belang het waard om te borgen? De tweede vraag is onlosmakelijk verbonden met de eerste vraag omdat veel belangen strijden om de aandacht van de burger en middelen schaars zijn. De conclusie van het verhaal zou ook wel eens kunnen uitdraaien op het voort laten bestaan van een marktfalen. De ultieme opdrachtgever van de overheid is de burger: die conclusie dwingt om goed na te denken wat het comparatieve voordeel is van de overheid.”  
(Teulings, Bovenberg en Van Dalen, 2003, 212)

De benadering van *De calculus van het publieke belang*, in het bijzonder de mogelijkheid om, althans tot op grote hoogte te beredeneren, zo men wil te calculeren, wat het publieke belang is, heeft zonder twijfel school gemaakt. Slechts weinig rapporten die inhoud en vorm van de overheidsactiviteiten in een bepaalde sector langs wetenschappelijke weg willen aangeven gaan aan het systeem voorbij. Wel grijpen zij weer terug op de iets afwijkende, traditionele economische terminologie. Een enkel, vrij recent voorbeeld van zo'n variant wordt hieronder puntsgewijs samengevat.

Publieke belangen vloeien voort uit marktfalen. Zij kunnen ontstaan in de volgende gevallen:

- 1 De markt waarborgt het belang niet of onvoldoende (marktfalen), iets waarvan sprake is als
  - a externe effecten optreden;
  - b het gaat om collectieve goederen;
  - c informatiescheefheid optreedt tussen vrager en aanbieder;
  - d marktmacht optreedt (monopolievorming).
- 2 Transactiekosten zijn zo hoog dat markten niet tot stand komen en welvaartsverhogende transacties niet gepleegd kunnen worden.
- 3 De overheid vindt de uitkomsten van vrije marktwerking niet acceptabel, vanwege
  - a ongelijke inkomensverdeling;
  - b paternalistische motieven (bijvoorbeeld ongezonde zaken als roken worden duurder gemaakt, nuttige als onderwijs goedkoper). (SEO 2007).

Bij 1 en 2 gaat het om marktfalen in de economische zin, bij 3 om 'politiek' marktfalen. Deze laatste benadering heeft, naar eigen zeggen, het voordeel boven die van de Calculus dat niet het begrip complex extern effect centraal staat, maar, volgens traditie, de verschillende vormen van marktfalen onderscheiden worden, waardoor de oorzaak van een probleem gemakkelijker te achterhalen zou zijn. Bij de diverse verschillen moet één punt niet uit het oog worden verloren: in alle opvattingen is toch een overheidsbesluit bepalend voor wat uiteindelijk als publiek belang wordt aangemerkt en behandeld. Uiteindelijk gaat het vooral

om een verschil in volgorde. Het *borgen* volgt het overheidsstandpunt, maar beoordeelt dit vervolgens, impliciet, op zijn realiteitsgehalte aan de hand van de borgingsmogelijkheden; het is niet zonder reden dat ook borging *binnen* de overheid in de vergelijkingen wordt betrokken. De ‘Calculus’ en aanverwante benaderingen bepalen in eerste instantie het publiek belang langs wetenschappelijke weg, maar bieden vervolgens ruimte aan beoordelingen van de (meer)waarde van daadwerkelijke publieke borging.

Inmiddels hebben bestuurskundigen zich ook nader op de benadering van publieke belangen gestort. Deze benadering kan als intersubjectief worden betiteld door de definitie van publieke belangen als “dat wat het bredere publiek of de samenleving verwacht of denkt te mogen verwachten” (Kennisinstituut voor Mobiliteit 2007: 35). Ook een publicatie van de Stichting Next Generation Infrastructures (TU Delft 2006: 5) wijst in deze richting, waar wordt gesteld: “onze definitie van publieke waarde is met opzet breed gehouden: er is sprake van een publieke waarde als betrokkenen in een beleidsveld een waarde als zodanig betitelen.” Met deze omschrijvingen, die geïnspireerd zijn op het Angelsaksische *public values*, wordt het begrip ‘maatschappelijke belangen’ uit *Het borgen van publiek belang* weer in beeld gebracht: alle belangen met een betekenis voor de samenleving. Deze omschrijving heeft de sympathieke eigenschap dat de betekenis van bepaalde zaken voor het publiek beslissend is, terwijl bovendien de manier waarop zij (het beste) geborgd kunnen worden onbevooroordeeld bekeken wordt. Nadeel voor beschouwingen door en voor de overheid is dat het beslissende en inmiddels redelijk ingeburgerde begrip publiek belang wordt losgelaten.

Overigens moet ook de kritiek uit bestuurskundige hoek vermeld worden dat *Het borgen van publiek belang* een te strikte scheiding, een dichotomie tussen de wat- en de hoe-vraag zou bepleiten. Zo’n strikte scheiding zou inderdaad niet reëel zijn. De beantwoording van de wat-vraag hangt uiteraard ook af van de borgingsmogelijkheden: als borging niet of slechts tegen buitensporige kosten (‘overheidsfalen’) mogelijk is, zal het stempel ‘publiek belang’ misplaatst zijn. Deze wisselwerking tussen hoe en wat zit, zo lijkt het, echter impliciet ook in de kritische analyse van *Het borgen van publiek belang* besloten.

Om de indruk te vermijden dat alle verschillen tussen de verschillende theorieën irrelevant zijn is een korte verwijzing naar de eerdergenoemde recente studie van het KIM op haar plaats. Bij een inventarisatie van de publieke belangen bij het beheer van wegstructuur bleek dat het niet onbelangrijke belang ‘bereikbaarheid’ in de bestuurskundige visie wel, maar in de economische niet als publiek belang moest worden aangemerkt.

“Daar waar de baten van bereikbaarheid niet extern zijn, vallen zij in de ogen van de econoom niet onder publieke belangen. Dat laatste geldt ook voor alle belangen van de weggebruiker, die volgens de econoom per definitie privaat zijn. Merk op dat het bestuurskundige belang hier het gevolg is van de bestaande institutionele vormgeving met een publieke wegbeheerder. (...) De bestuurskundige baseert de selectie van publieke belangen op de uitkomsten van interactie tussen groepen zoals die in de werkelijkheid plaatsvindt. De economische visie stelt daar een theoretische, maar objectieveerbare selectiemaatstaf (marktfalen) tegenover.” (Kennisinstituut voor Mobiliteit 2007: 41)

## 9.6 KORTE NABESCHOUWING

De term publiek belang is geïntroduceerd als hulpmiddel bij de beoordeling van voltooide of toekomstige operaties als liberalisering, privatisering of verzelfstandiging van activiteiten die tevoren volledig door de overheid werden uitgevoerd. De achtergrond van het eerdere staatsmonopolie was/is verschillend: het kan gaan om infrastructuur-gebonden sectoren waar een natuurlijk monopolie geen ruimte leek te bieden voor een alternatieve marktordening (elektriciteit), het kan gaan om diensten die zonder forse overheidsbijdragen of -activiteiten niet of zeer gebrekkig tot stand zouden komen (openbaar vervoer, wegen en dijken), maar ook activiteiten waarbij rechtsgelijkheid en rechtszekerheid te belangrijk lijken om de beslissing uit te besteden (verlening van studiebeurzen). Technische ontwikkelingen en de behoefte aan ‘grote’ en ‘kleine’ efficiëntie maakten teruggred, in verschillende mate en vormen, van de overheid mogelijk en politiek gewenst. Door bepaalde aspecten van de ‘oude’ overheidsprestaties als publiek belang te kwalificeren werd duidelijk gesteld waarom het ook in de nieuwe constellatie in ieder geval zou moeten gaan, en door verschillende uitvoeringsmodaliteiten en daarbij mogelijke ‘borgingmechanismen’ te vergelijken werd de keuze voor een methode die efficiëntie en effectiviteit optimaal tot hun recht zou laten komen mogelijk. Ook kon onder omstandigheden dat bij bepaalde constructies bepaalde essentieel geachte belangen zo ‘onder de tram zouden komen’ dat gekozen moest worden voor geen verandering, of voor een andere vorm dan was beoogd.

In feite zijn er twee vragen aan de orde: zijn er publieke belangen in het geding, en zo ja hoe kunnen zij het beste verzekerd/behartigd worden? Wat is de meest aangewezen marktordening en welke borgingmechanismen zullen het effectiefst zijn? Het gaat hierbij niet om vrije keuzen: aan de kenmerken van de infrastructuur, Europees-rechterlijke kaders en de status-quo in een sector kan niet voorbijgegaan worden. Achterliggende gedachte – vaak wat uit het oog verloren waar de overheid al lange tijd ‘alles’ deed – is ook: is overheidsinterventie gerechtvaardigd? In ons democratische systeem is strikt genomen formele legitimatie voldoende, maar in een vrijemarkteconomie is een inhoudelijke legitimatie gewenst (en inmiddels volgens EU-regels dikwijls ook vereist), dus: zijn er zaken van (maatschappelijk) belang die zonder overheidsingrijpen niet tot stand zouden komen? Zo ja, dan is ingrijpen gerechtvaardigd, of wellicht zelfs gebo-

den. Maar ook, zo ja, is ingrijpen dan per saldo lonend, of kosten de overheidsinterventies meer dan ze opbrengen?

Het is vooral bij dit soort vragen dat het denken over publiek(e) belang(en) en borgingsmechanismen zijn waarde heeft bewezen. Wetenschappelijk gefundeerde vergelijkingen – de uitgebreide literatuur moet hier korthedshalve verder buiten beschouwing blijven – kunnen de kwaliteit van de besluitvorming ongetwijfeld verhogen.

De introductie van het publieke belang hield (en houdt) verband met regimeveranderingen, al waren die al geruime tijd gaande. Publieke belangen zijn op nationaal niveau geformuleerd, in termen die vooral het eindproduct, de dienstverlening betreffen. Eisen aan de kwaliteit, kwantiteit en toegankelijkheid van de infrastructuur zijn gebruikelijk, maar worden gewoonlijk geformuleerd vanuit hun betekenis voor dit eindproduct. Publieke belangen moeten afgewogen worden, want uit hun aard kunnen zij niet alle tegelijk volledig gerealiseerd worden, en zij moeten worden geoperationaliseerd door ze te preciseren en van de nodige ‘borging’ te voorzien. Bovendien zullen ze bij tijd en wijle geactualiseerd moeten worden: niet alleen de beoordeling van hun onderlinge gewicht, maar ook kunnen veranderende omstandigheden, nieuwe regimeveranderingen aanleiding vormen tot heroverweging. Ook bij zulke actualisering, die elders in deze bundel uitvoerig aan de orde komt, kan ‘het publiek belang’ als ‘discipline-rend middel’ zijn nut blijven bewijzen.

## NOTEN

1. Zie hiervoor uit de reeks *Liberalisering van energiemarkten*, Tweede Kamer 28982, nr. 18 en de bijlagen en nr. 29, alsmede de, inmiddels de Tweede Kamer gepasseerde, wetsvoorstellen tot wijziging van de Elektriciteitswet 1998 en de Gaswet i.v.m. nadere regels omtrent onafhankelijk netbeheer (Tweede Kamer 30212, met name nr. 3, de memorie van toelichting) en tot implementatie en aanscherping toezicht netbeheer (Tweede Kamer 29372).
2. Naar het schijnt zal slechts privatisering van een minderheidsbelang in de regionale netwerken op grond van een ministeriële regeling mogelijk worden gemaakt (zie Tweede Kamer 2005-2006, 28165, nr. 46, 39).
3. Tweede Kamer 2005-2006, 28165, nr. 46.
4. De Raad beveelt aan om bij de concretisering van publieke belangen zo dicht mogelijk te blijven bij ontwikkelingen in Europees verband, met name die rond het begrip openbare dienstverplichtingen (op te leggen aan bedrijven in netwerksectoren als waren zij een openbare dienst; zie Europese Commissie, *Groenboek over diensten van algemeen belang*, COM(2003) 270, 21 mei 2003).
5. De Raad voor v en w geeft hierbij wel enkele algemene wijsheden, zoals het feit dat de definitie van publieke belangen dynamisch is, dat diverse betrokken overheden vaak ook hun eigen verborgen (publieke!?) belangen hebben, en dat het niet zelden aantrekkelijk is om bij conflicterende belangen heldere keuzes te vermijden.
6. Ter vermijding van misverstand: dat ook in andere sectoren rendement door andere eisen gecorrigeerd kan worden is eerder al gebleken.

## LITERATUUR

- Bruijn, J.A. de en W.M. Dicke (2006) 'Strategies for Safeguarding Public values in Liberalized Utility Sectors', *Public Administration*, 84, 3: 717-735.
- Bruijn, J.A. de, E.F. ten Heuvelhof en M.J.W. van Twist (2004) 'Calculeren voorbij de calculus. Identificatie van publieke belangen in het politiek-bestuurlijke debat', blz. 1-14 in kenniscentrum voor Ordeningsvraagstukken *Essays over de calculus van het publiek belang*, 's-Gravenhage, z.u.
- Dicke, W.M. en J.A. de Bruijn (2003) 'De borging van publieke belangen in de nutssectoren', *Bestuurswetenschappen*, 57, 6: 474-493.
- Donner, J.P.H. (1998) *Staat in beweging*, WRR Voorstudies en achtergronden V 100, Den Haag: Sdu Uitgevers.
- Kennisinstituut voor Mobiliteitsbeleid (2007) (M. Lijesen et al.), *Publieke belangen en weginfrastructuur*, Den Haag: KIM.
- Ministerie van Economische zaken (2000), *Liberalisering en privatisering van netwerksectoren; Publieke belangen en marktordering*, Tweede Kamer 1999-2000, 27018, nrs. 1-2.
- Ministerie van Verkeer en Waterstaat (2003), *Het borgen van publieke belangen in v&w-netwerksectoren; Eindrapport*, Den Haag: z.u.
- Nationaal Platform Anders betalen voor mobiliteit (commissie-Nouwen) (2005) *Eindrapport*, Den Haag: eigen uitgave.
- Raad voor Verkeer en Waterstaat (2004a) *Hoezo marktwerking...?*, Den Haag: z.u.
- Raad voor Verkeer en Waterstaat (2004b) *De waarde van het openbaar vervoer*, Den Haag: z.u.
- SEO Economisch onderzoek (2007) (B. Baarsma et al.) *Methodiek doorlichting VROM-beleid; op zoek naar publieke belangen* (SEO-rapport nr. 966), Amsterdam: SEO.
- Stefanski, M., W. M. Dicke, M. van Eeten en E. F. ten Heuvelhof (2007) 'Elektriciteit op de markt. Het gesmoorde conflict rond publieke belangen bij de invoering van de Elektriciteitswet', *Bestuurswetenschappen* 61, 4: 31-50.
- Teulings, C.N, A.L. Bovenberg en H.P. van Dalen *De calculus van het publieke belang*, 2003, (via) <http://www.minez.nl>.
- TU Delft, Stichting Next Generation Infrastructures (2001) (W. Dicke et al.) *De borging van publieke waarden in watermanagement; wikken en wegen van strategie tot uitvoering* (Eindrapportage voor Ministerie v&w), Delft: TU Delft.
- Wetenschappelijke Raad voor het Regeringsbeleid (1999) *Over publieke en private verantwoordelijkheden*, WRR Voorstudies en achtergronden V 105, Den Haag, Sdu Uitgevers.
- Wetenschappelijke Raad voor het Regeringsbeleid (2000) *Het borgen van publiek belang*, Rapporten aan de Regering nr. 56, Den Haag, Sdu Uitgevers.

## 10 INFRASTRUCTURE INVESTMENTS ON THE EDGE OF PUBLIC AND PRIVATE DOMAINS

*Geert R. Teisman*

### 10.1 INTRODUCTION

Infrastructure investments are for a large part sponsored by public organisations. A significant part, however, is money from private companies. Due to the large amount of capital needed for infrastructure investments, a lot of attention has been paid to the economic aspects of these investments. Cost-benefit analyses have become a regular feature in the decision-making and realisation processes of such investments. But, despite the application of a variety of these analyses, infrastructure investments still face cost overrun, delays and debates regarding the expected return on the investments. I feel that these structural problems with infrastructure investments cannot be solved by economic analyses as such. The problems lie with the organisation of the investment processes. Only if the process is organised in a mature way will the infrastructure project's cost benefit ratio be positive. This essay thus focuses on the organisational perspective of investments in infrastructure, especially the topic that has been heavily debated in the last decade – the mix of public and private interference.

In this essay, I will elaborate the argument that investments in infrastructure development will take place on the edge of public and private domains. Despite attempts to locate examples in a strictly private or public domain, the reality of infrastructure development is that of 'vulnerable' hybridism. This hybridism is vulnerable because the problems that occur will likely be attributed to the unclear distinction between the public and private domains. A new search for a clear division of tasks between the public and private domains will then occur. This search is supported by economists criticising the transaction costs of hybrid arrangements, and scientists such as Jane Jacobs, who argue that the public and private domains are incompatible value systems. In reality, however, the search for this exclusive distinction of the two domains often ends up with a new hybrid arrangement. Could it be that infrastructure investments are mixed goods and thus cannot successfully be provided in either a purely public or purely private domain? I lean towards a positive answer to this question and will support my belief with the case of infrastructure investment in the United Kingdom's West Coast Main Line. First the responsibility for investments was purely public. This did not lead to satisfactory results. Then the responsibility was handed over to the private sector. This resulted in the bankruptcy of the private infrastructure provider. Finally, a hybrid arrangement succeeded in getting the job done.

Despite attempts to clearly divide the public and private domains, the edge of both domains will not have distinct borderlines. This reality of blurred borderlines in hybrid arrangements can create an unstable institutional context for the management of infrastructure provision and investments. I will thus attempt to

increase understanding of the patterns of interaction between the public and private domains in order to develop more mature organisational and managerial arrangements that can deal with hybridism and the problems it might bring.

### 10.1.1 ARGUMENTS AGAINST HYBRIDISM

In the Netherlands a parliamentary inquiry on the relationship between public officials and the building industry (Parlementaire enquête Bouwnijverheid 2002/2003) led to a variety of measures formalising the relations between the two spheres. Personal relations based on trust between public and private officials was no longer accepted as a sound way of working, and was replaced by impersonal relationships based on institutionalised distrust. Every job now has to be put out to tender. Furthermore, the new formalisation and division of the two systems make it difficult to not choose the lowest tender bid. But this does not guarantee the highest cost benefit ratio. In addition, transition costs have gone up considerably.

A dislike of hybridism can be found in the works of Jane Jacobs. She argues that the value orientations in the public and private domains are fundamentally different. She advocates keeping both domains as divided as possible. In the Netherlands, a committee chaired by the present chairman of the Social and Economic Council of the Netherlands, Rinnooy Kan, two decades ago proposed the unravelling of the public and private sectors as much as possible. Politicians and private sector officials agreed to this idea.

### 10.1.2 REALITIES IN FAVOUR OF HYBRIDISM

Despite the proposal to separate the two domains, the truth is that there are only a few examples of full entwinement between the public and private domains. Hybridism can be found everywhere. In that respect, it is curious to note that concurrent with Kan's report, the Department of Finance started up a program to support Public Private Partnerships (PPP). The PPPs would combine the best of both worlds, where private involvement would lead to a better understanding of the market and lower production costs. Several experiments with PPPs have been established in recent decades.

It is this double-faced reality that makes it important for a better understanding of what goes on in the domain of infrastructure investments. On the one hand, an endless line of attempts to create clear, formal boundaries has existed throughout history and will continue to occur. But on the other hand, hybridism is ever present. This is the case in the Netherlands and in many other countries. The opinions about where the line between public and private domains lies change over time, but at the end of the day, clear-cut boundaries do not exist. What is debated instead, are the cross-border interfaces.

In the organisational sciences there are scholars advocating hybridism (In 't Veld, Goldsmith and Egger). In 't Veld and his colleagues (1991) argued that, despite the existing resentments, hybrid organisations and arrangements had become and

would remain important elements in policy and management networks dealing with products that have private as well as public aspects. Goldsmith and Egger also argue that networks are the norm in society and that any attempt to go back to clear distinctions between domains will not help develop more effective governance strategies. These authors are much more interested in understanding the dynamics and patterns of behaviour in governance networks and the ability to develop management strategies that no longer focus on dividing the public and private domains, but on making interconnections and synchronising the behaviours of all the parties involved in joint infrastructure development. Governance networks beyond the borders of public and private domains occur because realising infrastructure investment that contains both businesslike efficiency and public values cannot be achieved by parties that act only in one of the two domains. Investments in building good relations between both parties are required, and it is not realistic to see them as transaction costs that can be eliminated by choosing one over the other.

### 10.1.3 FROM PUBLIC TO PRIVATE – THE RISE OF PRIVATISATION

In the previous century, infrastructure provision and investments were left to the public domain. There was a certain preference for creating public monopolists. The Transport Act of 1947, as part of the policy of nationalising public services by Attlee's Labour Government, nationalised the rail network in the UK. The Dutch Railway Company NS was established in 1938; its two predecessors had merged and the Government received all of the shares. In Germany, the Deutsche Reichsbahn Gesellschaft was established in 1920. After the Second World War the Deutsche Bundesbahn served West Germany. With the fall of the Berlin Wall it merged with the East German Reichsbahn and became the Deutsche Bahn. The dominant organisational paradigm of that time was to bring all operations under a single umbrella, leading to an effective provision of infrastructure and transport services.

This idea was questioned heavily in the 1980s, a period of economic stagnation. It was argued, and not without reason and empirical evidence, that public monopolies had led to rather inefficient and ineffective systems. In the 1990s, a certain degree of privatisation took place in many countries, the UK being a frontrunner. British Rail, the public monopolist, was abolished and private company Rail-Track became the rail infrastructure provider. Germany, a frontrunner in establishing a state-owned railway company, was one of the laggards in privatisation. The Netherlands was in between.

This shift to privatisation was part of a much larger shift in societal preference. Thatcherism became a well-known term for that. New Public Management, consisting of techniques and practices drawn from the private sector to modernise the public one, became widespread in practice and theory. Anglo-Saxon countries were more open to this new idea than continental Europe, although elements of privatisation could be found in the latter, especially at a regional level.

#### 10.1.4 COMBINING THE BEST OF BOTH WORLDS

Nowadays the debate about public or private dominance has grown somewhat calmer. It is recognised – at least by many management experts – that both worlds have their strong and weak points in terms of strategic and operational management and that combining both worlds will create the best results in terms of efficiency and effectiveness. Along this line of reasoning, effective infrastructure investment strategies seems to become more a matter of creating a dynamic balance between governmental guidance and private production and exploitation, and managing this balance. Building up arrangements for public-private partnerships and developing skills for shareholder and stakeholder management will be the main avenues of improving investment strategies. At the end of my essay, I will give some indication about how this type of network management on the edge of public and private domains can be developed and improved. I will illustrate the case of the West Coast Main Line – an informative example of successful hybridism after a failed attempt to wholly transplant infrastructure provision from the public to the private domain. Before that I will also give a short impression of Dutch attempts to create arrangements on the edge of public and private domains. I will highlight cases of both failed and successful partnerships. In all of these cases the attempts in the public sector to unravel the two domains are at work. The interesting points, however, are that even though governments in Europe and in the Netherlands clearly make it hard to establish partnerships, it remains possible to do so.

After the presentation of the West Coast Main Line case, I will finish my essay with some ideas about how the government could become a supporter of partnerships instead of undermining them.

#### 10.2 PARTNERSHIP IN THE NETHERLANDS: IN BETWEEN ACTION AND RHETORIC

With the world-wide increase in the popularity of PPPs, the Dutch Ministry of Finance established a Knowledge Centre to support PPP initiatives. The Knowledge Centre argued that “international experiences demonstrate that a faster and more efficient implementation of infrastructural projects is possible through public-private partnership. Both public and private actors in the Netherlands have displayed an interest and willingness for PPP.” (Kenniscentrum 1998).

This argument for PPP can also be found in the UK’s policies during Blair’s administration (Falconer/McLaughlin, 2000) and the European Union (Teisman and Klijn, in Osborne 2000).

The policy theory in which PPP plays an important role is roughly as follows: PPP is co-operation between public and private actors, where mutual products and/or services are developed and in which risks, costs, and benefits are shared. It gives added value; this added value occurs when the integration of public and private efforts leads to output that would not have been realised without the PPP. This is a tempting theory, so much so that many governmental organisations in the Netherlands say they are in favour of partnerships. One has to question the

intentions of these governments, however. It could be the case that much of the talk about partnerships is more rhetoric that fits in with the world-wide debate, rather than a real change (Teisman and Klijn, 2002). If we look at the projects in the Netherlands that were defined by the national government as key examples of partnerships with the private sector, there does not seem to be a remarkable shift in governance approaches. This discrepancy between ambition and reality is illustrated by the case of the Utrecht Central Station project, which provides insights into the difficulties in achieving added value.

The Utrecht Central Station project involves the construction of 330,000 square meters of new offices, 1,750 apartments and 61,200 square meters of shops, in combination with infrastructural works. The access to the station and traffic facilities had to be improved so that passengers can quickly, efficiently and easily travel with public transport and find good connections with other types of transport.

In the early 1980s, the municipality, the national government, the Dutch railways and private companies came up with a redevelopment plan. In 1993, the four parties set up a development corporation. In 1996, however, the corporation practically ceased its operations. In 1997, a new venture presented a 'Definitive City Plan Design'. Mutual investments were agreed upon under the condition that the national government contribute its share. An arrangement was set up to support its implementation. A city supervisor was appointed, quality books were made, a quality team was created and a monitoring system was developed.

Nevertheless, the partnership between the municipality and the private parties failed (once again). There is no single reason or individual culprit in all this. The private parties withdrew because they were not prepared to invest in the public parts of the project. There was strategic dissent within one of the private parties, which was involved in a buyout during that same period. The difficult relationship between the local and national governments, however, also played an important role. The project was a prominent project in the national policy reports, but the national government did not want to get involved in the partnership. It said it was in favour of partnerships but did not want to run any risk associated with such partnerships, and it stuck instead to its role as a sponsor. This pattern is not unique. There are many instances where organisations favour partnerships, but are unwilling to adjust their ways of working to suit the needs of a partnership.

The majority of partnerships in the Netherlands seem to face these inter-organisational partnership problems. The parties involved have difficulties in combining the demands of a partnership with their internal demands. It seems that the inter-organisational capacity is just too weak to achieve added value, even if this value can be verified on paper. Table 10.1 summarises the inter-organisational configuration of parties that often occur in Dutch partnership projects. It contains parties involved in the Utrecht Central Station case, and the Amsterdam South Axis and Hoog Hage projects. A distinction is made between central and peripheral actors. Central actors have signed formal agreements regarding the content of the plans, are participating in consultations and meetings, and are members of especially created arrangements (e.g., the steering group). Peripheral actors have an interest but are not included in the partnership. They are part of the context in which the project is embedded. Central actors will have to consider

**Table 10.1** Actors in Infrastructure Investment Projects

Categories of actors	The Hague Central	Utrecht Centre	Amsterdam South-Axis	Interests (sometimes represented by actors in the category mentioned).
<b>Central actors</b>				
National government	X	X	X	Department of Transport (high speed train, rail systems, modal split; Water Management (RWS), accessibility; EZ (economic affairs), BIZA (urban policy); VROM (National Planning Agency)
Municipalities/ innermunicipal units	X	X	X	Land owner, public tasks and investor (UCP)
National Rail Real Estate	X	X	X	Owner, developer, and representative of other transporters (UCP) and/or sisters in NS Rail
Railway stations	X			Economic owner
Corio	X	X		Investor and owner (of shop provisions)
KN Jaarbeurs		X		Owner, user
Multi Real Estate	X	X		Developer (and partner jaarbeurs)
ING Real Estate		X	X	(Land)owner (partner WBN), financier, developer
ABN/AMRO			X	Owner, user, financier and investor
FGH Bank			X	Former owner and expert
<b>Peripheral actors</b>				
ING/Q-park	X			Owner Parking central
Shell Pension Funds	X			Co-owner Foundation Trust BV
Advisor/consultant		X	X	Process management, advisor for banks, city architectural coordinator etc.
OV- companies	X	X	X	Users
WTC RAI and VU			X	Users and owners of land and buildings
Architects	X	X	X	Experts
Shop owners associations	X	X	X	Users/Interested parties (usually involved via representation)
Home owners associations	X	X	X	Users/Interested parties (usually involved via representation)

the possibility of intervention by peripheral actors (as in the Utrecht case) or that the latter's actions may have substantial influence. Peripheral actors are not without power, but they act less systematically in those arenas where public and private parties meet.

As can be seen, many of the actors are participating in several of the projects. This multiple inclusion is important. Although projects are implemented at a local level, several actors perform on the national level. The opportunities for replacing participants are limited (Scharpf 1978). Public initiators are limited in the replacement of a chosen financier by another private actor and are usually bound to a given set of public players. This creates mutual interdependency. This interdependency explains why actors make fresh attempts to be involved in joint investment projects, even after failures such as the Utrecht Central Station project. At the same time, it also creates inertia. Parties are not that concerned

**Table 10.2** Groups of Actors in PPP

ACTORS	Why they are needed in PPP	The role they prefer to play	The institutional background in which the role fits in
National governments	Juridical authorities Financial provider Political legitimacy	Sector bounded policy maker (VROM, EZ, v&w) and sponsor of project elements, without taking responsibility for the whole	National supervisor and project selector in sector-specific policy networks
Local governments	Juridical authorities (zoning plan etc.), land positions	Initiator of local processes, but heavily dependent on national financial means	The local authority mainly focusing on local interests, often competing with neighbouring municipalities
Private owners of offices and shops	Ownership, possibility to provide extra investments and threat to leave	Ask for public investments in area development, and reject projects that disturb their actual market position	The short term need to survive often prevents them from the ability to support long term improvements.
Developers	Expertise/capacity Land/ownership positions (sometimes)	Manager of building processes aimed to gain short term profits	Participate in urban projects, primarily for short term gains
Private financiers	Financial provider	Setting aside means to gain short term profit or to gain a good return in the longer run	Participate in national networks and focus on realising profit and adequate investment portfolio
Advisors	Expertise and relative disinterest	Often project leader or mediator, coordinator, advisor, or contractor	Do not belong to a specific interest network, but maintain crucial professional networks
Societal parties	Support/political pressures /juridical procedures	Often criticsers of projects	Protection of their property and living conditions
Commercial parties	Veto power, support for possible integral approach (e.g., shop owners)	Critics or clients	From company networks, where certain developments are considered as necessary while others are seen as a threat

about being excluded, since they will probably be needed in future projects. This seems to encourage parties to stick to role preferences primarily based on internal dynamics. Table 2 provides an overview of the roles that various actors fulfil based on their institutional backgrounds.

This overview indicates the variety of actors involved in physical investment decision-making processes. In these networks, it is not easy to achieve results within a limited time span and budget. Building up partnerships in these networks is necessary, and yet it is an additional source of rising transaction costs and higher risks.

I will present one more example of an infrastructure project where a partnership was intended, but not achieved. In this case, investments were proposed for the expansion of the Rotterdam Harbour by way of a new polder for harbour activities.

#### **Box 10.1 The Project Mainport Rotterdam (PMR): fixed roles**

Since the 1980s, plans have been made for new industrial areas in Rotterdam harbour. Public authorities using cost benefit analyses, like the Central Planning Bureau, had doubts about the societal benefits of newly created land in the North Sea. In order to create a breakthrough in this debate, a joint study group of public and private party representatives explored the possibilities of private participation. It was proposed that active stakeholder management, in which the private sector could participate in investment decision-making right from the start, be set up. This would give private parties a chance to present creative ideas and generate insight on investment risks much earlier in the decision-making process. Despite the good intentions on both sides and the early consultation of the private sector, the result was still a traditional process in which public authorities were largely in charge. The public authorities themselves were involved in internal conflicts involving decisions of who was in charge. The Rotterdam municipality wanted to fit the PMR project into their strategy of regional development. The Harbour Authority wanted to fit the project into their strategy of fostering its position as one of the leading harbours in the world. The Department of Finance was looking into possibilities that involved returns on their financial investments. This internal struggle for power was a turn-off to the private parties. They became sceptical, and not without cause, about their profits from their participation in the project. Furthermore, environmental groups doubted that private sector parties would take environmental issues into consideration. These groups assumed that the private parties would only invest in those parts of the plan with the highest return on investment, and that their preferred solutions like underground oil storage and multiple land use would be ignored as they are considered to be lower returns on investment. This caused a deadlock, with each party refusing to alter its position or relinquish control. The entire plan for a joint public-private investment fell apart.

#### **10.2.1 WHY PUBLIC AND PRIVATE PARTNERSHIPS FAIL; THE VIEWS OF JANE JACOBS**

The PMR project shows the difficulties involved in the process of changing existing role patterns, and the challenges of co-operative behaviour, on the edge of public and private domains. Jane Jacobs (1992, pp. 32) offers this explanation: The

public and private domains are two different ethical systems with different ‘moral syndromes’. The public domain is characterised by the ‘guardian’ syndrome, while the private domain is characterised by a ‘commercial’ syndrome. The guardian syndrome is based on values like avoiding trade and commerce, achieving discipline and loyalty, and sticking to tradition and hierarchy. There is a certain degree of fatalism, combined with a strong commitment to the task at hand. The commercial syndrome, on the other hand, is based on values such as avoiding violence, voluntary contracts, honesty, competitiveness, optimism and an appreciation for initiative.

According to Jacobs, there are only two types of survival: taking and trading. The former is typical of the state and the latter typical of the market system. Each of the two moral syndromes, she argues, belongs to one of the two strategies of survival. They cannot be mixed without causing massive problems and should thus be kept apart.

### 10.2.2 IN SEARCH OF SUCCESSFUL PARTNERSHIPS; FALSIFYING JACOBS’S THESIS

Jacobs seems to conclude that PPP is doomed to fail as it mixes two value systems that should not and cannot be combined. The intention of PPPs of generating innovative products with added value is seen as naive and even a cause for blame. Jacobs’s theory is based on research in the past and the examples presented above seem to confirm her theory. The question, however, is to what extent these results from the past can be projected onto the future. There are cases in which partnerships were established and actually succeeded in achieving a variety of goals. In this study, I briefly refer to the two cases below.

#### **Box 10.2      The development of Pettelaar Park as a joint company of public and private ownership**

This project is one of a select few in the field of real estate investments. The development of Pettelaar Park, an office district in Den Bosch built in 1986, is based on a joint effort by the municipality, a construction company and a few banks. The initiative came from the private sector, and a consortium was set up with the municipality. The municipality was responsible for the formal decision-making within the domain of public law and jointly agreed timetables. The tripartite management team succeeded in reconciling the ambitions of all of the involved parties. The offices were finished during a period when the market was bullish (1998/1990). All of the participants gained a higher-than-expected return on investment. A portion of the revenue was set aside for new investments. But this success story was short-lived. When presented with the outcome of the partnership, the municipal council did not rejoice. Instead they argued that the municipality in the future should be totally in charge so they can keep all the revenues of the project instead of just half.

**Box 10.3 Vathorst, a joint responsibility for area development**

In June 1995, the municipality of Amersfoort decided to develop the Vathorst area. The estimated cost was about 600 million euros and focused on a combination of housing (11,000), offices and other facilities and infrastructure. In 1996 and 1998, agreements were reached between the municipal council and a private consortium. In January 1999, the town council accepted the development plans. A joint development company was established that included both a private and a public director. However, the national government as well as the European Union were clearly not very supportive of this partnership and viewed it suspiciously (Berenschot 2005).

The EU's role in this case is interesting. According to an interim conclusion reached by the European Commission, the municipality of Amersfoort had not kept pace with European laws regarding the contracting out of projects to the private sector. The principles of creating a free market and open competition were in conflict with the idea of a long-term partnership.

Nevertheless, the new section of Amersfoort has now been largely completed and its residents seem satisfied with their neighbourhood. This proves that partnerships can create added value and that working on the edge of the public and private sectors is possible. The institutional arrangements and value orientation in higher levels of government, however, complicate the management task of PPP's.

The fact that even successful partnerships do not stimulate political support for the development of a real culture of PPP is intriguing. A similar pattern can be observed in the domain of investments involving only infrastructure. In this domain, there has until now been a preference for financial arrangements. In the case of two tunnels (Tunnel under the Noord and Wijkertunnel) and one highway (A59) the investments were gathered by private capital. The private banks asked for rather reasonable interest rates in line with the risks they were undertaking. The infrastructure was realised, but the initiators of this private involvement received no accolades. Even by the Netherlands Court of Audits observed that the private investments were more expensive than the equivalent public funding and thus should not be used for investments in infrastructure. For these reasons, private finance is still somewhat of an insignificant part of investments in Dutch infrastructure. There were also unsuccessful attempts to encourage private parties to invest in the Betuweline and High Speed Line between Amsterdam and the Belgian border. The Dutch approach still seems to be rather public domain-centred. The above examples point out that the Dutch, like other societies, are still struggling with the partnership approach. But despite resistance to it, especially from the public sector, some form of partnership and interaction does eventually materialise. I will underline this pattern with the example of the upgrading of the West Coast Main Line in the UK.

**10.3 THE WEST COAST MAIN LINE: IN SEARCH OF AN UPGRADE**

The West Coast Main Line (WCML) is an existing system of railways between London and Glasgow<sup>1</sup>. Upgrading was necessary due to a substantial backlog in

maintenance. The decision-making behind the upgrading and the management of the upgrading process provide us with a richly illustrative example of how infrastructure developments look for a balance between the blurred boundaries of the public and private domains. In this case three elements – a dominant public monopoly, a dominant private enterprise approach and a joint approach of public, private and not-for profit companies and organisations – combined with an interesting strategy of stakeholder management.

We reconstruct the process of upgrading into three rounds (Teisman 2000). Assuming that general knowledge about the traditional public monopolist approach is sufficient, I will focus on the second round in which the private sector dominated the process and especially the third round, where the upgrading process was located on the edge of the public and private domains. The fact that in a period of about 20 years the upgrading process was transferred from the public to the private domain and then ended up (unintended and unforeseen) somewhere in the middle, gives us some indication about the degree of confusion in the UK regarding infrastructure development.

### 10.3.1 A SHORT OVERVIEW OF THE CASE

The 650-km WCML is Europe's longest and busiest mixed-use railway, and links London with Glasgow. It also serves the West Midlands (Birmingham), the North West (Manchester and Liverpool) and North Wales (with connections to and from Ireland). More than 2,000 trains a day use the line, generating 22 million passenger-train kilometres and 6 million freight-train kilometres a year. The WCML accommodates circa 40% of the total rail freight traffic in the UK.

The upgrading, as with many infrastructural investment projects, was confronted with considerable cost overruns and delays. The first budget for upgrading in 1995 was under £ 3 billion. Six years later, the estimates, based on actual spending, rose to £ 13 billion. After national government intervention, the new management of the project established a budget in 2003 of £ 9.9 billion. The current estimate is that the upgrading will cost £ 8.3 billion.

#### ***Round I: Locked in a non-innovative British Rail public utility monopoly until 1993***

Built in stages over three decades beginning in the 1830s, the WCML was electrified in the 1970s. British Railways emerged out of the regional rail industries in 1948 as a result of the Labour government's nationalisation policies and for a long period managed the WCML. Its successor, British Rail (BR), managed the WCML in the 1970s. Upgrading plans were made, but never implemented. Thus, Round I can be described as 'the public monopoly period'. BR was in charge, had a lot of 'tacit' knowledge of what should be done, but did not have much realisation powers. It just kept the WCML running by putting money where the most serious breakdowns were likely to happen. In the 1990s, the infrastructure was ageing and train service became unreliable. This, combined with a wave of privatisation, eroded support for BR and stimulated the search for other approaches.

**Round II: The story of broken dreams in the private domain.**

The Railway Act 1993, introduced by John Major's government, started with the privatisation of BR. RailTrack (RT), which took over ownership of tracks, signalling and stations, was privatised in 1997. The rail industry, however, still relied on substantial public subsidies for both capital investment and ongoing revenue support. Furthermore, the Office of the Rail Regulator was established to regulate the industry. Nevertheless, the main idea within the government was that they were relieved of the burden of upgrading, a task which the market would assume.

In 1996, RT closed the Passenger Upgrade 1 (PUG1) contract with the Office of Passenger Rail Franchising (OPRAF), calling for modernisation with existing technologies. Virgin Rail Group, a joint venture of the Virgin Group and the Stagecoach Group, won the franchise to operate long-distance passenger trains on the WCML in 1997 until 2012. Virgin agreed with RT on a renewal and upgrade programme known as Passenger Upgrade 2 (PUG2). PUG2 was a technical innovation leap, which would allow higher speed trains with increased frequency. Virgin took the view that significant increases in capacity would be needed for its franchise. After being approved by OPRAF and the Rail Regulator, PUG2 was agreed to in 1998.

RT and Virgin started enthusiastically with their upgrading plans. They relied on new technology known as 'moving block signalling' (which was part of the European Rail Traffic Management System, or ERTMS) to increase capacity and train speeds at low cost. RT estimated that the upgrade would cost £ 3 billion and would be ready by 2005. The journey time from London to Birmingham would decrease from 1 hour and 40 minutes to just 1 hour. Virgin ordered a fleet of new Italian tilting trains capable of running at 140 miles/hour. The delivery was planned for May 2002. The programme, however, ran into difficulties. Costs rose rapidly and in December 1999 RT decided not to use moving block signalling, as the technology was not sufficiently developed yet. Other factors, including West Coast contract liabilities, created a financial crisis for RT that resulted in the government putting RT into Railway Administration in October 2001. Virgin's procurement of its new tilting trains also fell behind schedule.

The private consortium of RT and Virgin, both eager newcomers, was in the foreground in this second round. By making and implementing ambitious, though unrealistic, plans and contracts, they acted like private companies in search of huge profits. In that respect, RT was the 'loser'. It focused on financial expertise ("they were a bank, not a railway company")<sup>2</sup> and had neither the expertise in operations, assets and engineering nor the ability to manage the contract ("contractors basically had RT's checkbook"). RT did not realise that Virgin was trying hard to minimise its financial risks by passing them onto RT. Virgin had to know that the contract was undeliverable from the side of RT. RT oversold the tracks to the train operators and poorly assessed the state of the infrastructure (particularly tracks and the signalling system).

The plan was (in hindsight) doomed from the beginning. RT had oversimplified safety issues and not assessed the technical viability of moving block signalling

prior to promising the speed increase to Virgin and the Government. The technology had never been implemented on such a scale before. In 2000, there was the Hatfield rail crash, which was due to metal fatigue. It showed the public that RT lacked sufficient knowledge about the state of the railway system. In reaction, RT imposed over 1,200 emergency speed restrictions on its network, creating enormous delays and severe losses for the service providers. At that moment of crisis, Secretary of State for Transport, John Prescott, decided that the Strategic Rail Authority (SRA), a non-departmental public body providing strategic direction for the British rail industry, should step in.

In hindsight, the assessment of the PUG2 contracting was clearly wrong, as the spokesman for Virgin acknowledged: 'they built brick walls around us'. RT's bankruptcy in 2001 forced a reappraisal of the plans. The revised estimates indicated that the upgrade would cost £ 13 billion and would be ready by 2008 with a maximum speed of 200 km/h for tilting trains.

### ***Round III: Reinventing public-private co-operation: A combined approach***

The SRA concluded that abandoning the project was not a viable option as the ageing infrastructure needed to be replaced. Moreover, stopping work already contractually agreed upon would have meant substantial financial penalties for Network Rail, a private not-for-profit company that took over from RT in October 2002. Virgin renegotiated their contracts with the government – from high risk, high returns to low risk, low returns. The SRA initially functioned in a shadow form until the Transport Act 2000 brought it into force on 1 February 2001. The British government wanted the SRA to take a more interventionist role with RT and Network Rail, but never gave it the legal power to do so. In 2004, the SRA was abolished and its strategic tasks transferred to the Department of Transportation. Since April 2004, the WCML has been funded by loans from Network Rail, serviced by receipts of network grants from the SRA, and its track access charges paid by the freight and train operating companies. Regardless of its formal position, the SRA played an important role in redirecting the course of the upgrading process and the project management strategy. By 2002, some project work had already been carried out, including remodelling schemes at Euston and Proof House Junction, Birmingham. Much, however, remained to be done before the introduction of high-speed tilting trains could be achieved.

The WCML Strategy report, published in June 2003, addressed the need for repairs and the renewal of the railway to ensure its continued operation. The capacity for the implementation of high-speed trains had to be provided, and this had to be combined with the continued provision of local and regional passenger services as well as freight traffic. It was decided that proven technology would be used wherever possible. A project on such a scale could not be burdened with the uncertainties of new technology. A business case was established, which led to insights about the revenues for the upgrading activities. It also acted as a communication tool between the actors involved in the project. In 2005, the SRA merged with the Department of Transportation. The Office of Rail Regulation (until 2004, called the Rail Regulator) set track access charges for five-yearly 'control

periods' based on the Office's assessment of Network Rail's costs to efficiently operate, maintain and renew the track. £ 50 million came from a third party and the European Union. Finally, the estimated costs were reduced from £ 13 billion to £ 9 billion. Due to further cost reductions, the estimated costs are now less than £ 8 billion (December 2006).

The upgrade between Euston and Crewe was finished in 2004. This enabled improved services to be introduced on all key inter-urban corridors, including increased frequencies and faster journey times. Trains were permitted to operate at 125 miles/hr in tilt mode south of Crewe. Acceleration of Anglo Scottish services was implemented. Virgin reported that passenger numbers on Virgin West Coast have increased from 13.6 million in 1998 to 18.7 million in 2006. By April 2006, some three quarters of the project's physical work had been completed. The final stages are to be completed by December 2008.

The third round is a hybrid period. The management was based on extensive consultation with shareholders within the railway industry and external stakeholders such as local authorities and user groups. This led to a complex institutional arrangement, but this time the management team was able to deal with the complexity. They focused on output (business case) and support (stakeholder management). The governance in the third round is an intriguing combination of public guidance and private production as well as project orientation and process sensibility. A network of actors was brought together who were capable of dealing with the characteristics of interdependencies in the physical and social rail network. Within the network there were formal divisions in tasks and responsibilities in line with traditional management theories, but there were also informal networks. Within these networks methods of collaborative planning were applied, in line with management theories dealing with complexity.

This third round is very interesting because it seems to create a new balance between the public and private sectors, mediated by the not-for-profit Network Rail. Network Rail seems to have been broadly accepted as an organisation that performs well and is able to manage the exploitation and management of the rail system. In its 2007 business plan, Network Rail declared that punctuality was at a seven-year high (88%) and that the final goal of 90% will be reached before 2009. It has reported a profit (of £ 747 million) for the first time, due to substantial savings in operating and maintenance costs and improvements in the unit cost of renewal. This supports my impression that organisations on the edge of public and private domains can not only survive, but even perform at a level that has not been reached before by both public and private predecessors. Rail infrastructure has system characteristics and needs a system approach; this is best done in the public domain. Rail infrastructure also has market characteristics: efficiency will reduce costs and improvements can increase market share. This is served by the private domain. A hybrid organisation can thus combine the best of both worlds.

But this combination depends on the quality of the management, specifically the interaction and relationship between all stakeholders. The bankruptcy of RT created a sense of urgency, leading to effective co-operation between the Department of Transportation, Network Rail and Virgin and many other players in the field of rail infrastructure. This orientation on joint interests and partnerships seems to prevail. Network Rail has stated that they cannot succeed on their own: ‘To be successful we must work in close partnership with train and freight operators and the rest of the industry. Our plans also need to inform and reflect the requirements of government, as well as passenger and freight user groups, and local funders.’ (Business Plan 2007:7). In their stakeholder approach, Network Rail applies a rather broad definition of who is a relevant stakeholder. Not only are passenger organisations and local governments part of the network, but environmental groups are also included. Network Rail’s website ([www.networkrail.co.uk](http://www.networkrail.co.uk)) states that their environmental stakeholders include: Environment Agency, Natural England, Scottish Natural Heritage, Scottish Environment Protection Agency (SEPA), Countryside Council for Wales, Defra (the Department for Environment, Food and Rural Affairs), Water UK, Local Authorities, Wildlife Trusts, Royal Society for the Protection of Birds (RSPB), World Wide Fund for Nature (WWF), specialist environmental groups such as the Centre for Ecology and Hydrology, local environmental groups such as the Warwickshire Amphibian and Reptile Team (WART), and other non-governmental organisations (NGOs).

The Department for Transport has a similar orientation.

“DFT wants to provide strategic direction and to procure rail services and projects that only it can specify. Responsibility for day-to-day delivery of railway services rests with the industry. To fulfil this role, DFT is working in partnership with the industry to secure the railway the country wants at a price it can afford.” ([www.dft.gov.uk/pgr/rail/introrail](http://www.dft.gov.uk/pgr/rail/introrail)).

The Department for Transport clearly continues to work on improving its relationship with Network Rail and others. Improvements are, amongst others, sought in transparency and clarifying the public values that should be met by Network Rail, Virgin and others:

“In July 2007 the Government will, for the first time, specify what it wants to buy from the railway (in terms of safety, performance and capacity) – the five-year ‘high level output specification’, and will say how much money it has to spend – the ‘statement of funds available’.”

This will be published alongside a long-term rail strategy that will consider the longer term challenges facing the railway such as increasing demand, environmental pressures and customer expectations and provide a sense of direction and continuity for the rail industry. The department is responsible for specifying and contracting franchised passenger services out to train operating companies. The consumer body PassengerFocus; Network Rail; the passenger train operators

(ATOC), the Office of Rail Regulation and the rail freight industry are defined as key partners. At the same time, the DFT places national investments in a wider perspective:

“We maintain strong relationships with Transport Scotland and the Welsh Assembly Government who have devolved rail responsibilities and co-operate with a wide range of local and regional bodies such as regional assemblies, regional development agencies, Transport for London and passenger transport executives. Also we ensure the effective alignment between UK and EU rail strategies such as interoperability and the European Rail Traffic Management System.”

The Department for Transport communicated its stakeholder strategy explicitly in a letter dated 3 August 2005:

“This letter sets out . . . how non-rail industry parties in England and Wales (e.g., local authorities or private developers) should work with Network Rail and DFT in progressing their plans and potential projects.”

Within the DFT Rail team relations with stakeholders will be led by the Customer and Stakeholder Relations. The Rail Regional and Passenger Relations team, led by Stephen Clark will act as the ‘point of contact’ within DFT; additionally other teams within DFT Rail will deal with the specifics of individual projects (e.g., the Projects team, or the Franchising team) – in all cases the Rail Regional and Passenger Relations team will be able to navigate through DFT on behalf of stakeholders. The new Customer and Stakeholder team will come into existence on 22 August. Network Rail is putting in place a new organisation to deal with enhancements led by a Route Enhancement Manager reporting directly to each Route Director. The Route Enhancement Manager will be Network Rail’s focal point for any future enhancement projects.

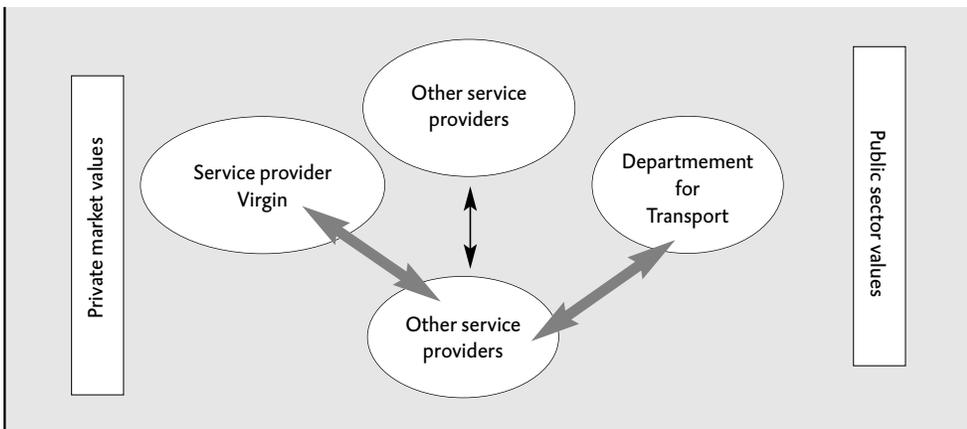
Within the planning arena, the Route Enhancement Managers will work closely with Network Rail’s Route Planning teams who are responsible for the development of the new Route Utilisation Strategies and the longer term strategy for the route rather than the development of individual schemes. They will also work alongside Network Rail’s Public Affairs Managers who deal with third parties across a wider range of issues. Network Rail’s Head of Customer Services, Barbara Barnes will be able to guide promoters to the most relevant individual. Network Rail will be the prime point of contact with 3<sup>rd</sup> parties on projects, and will manage the rail industry response to promoters’ proposals. In many cases, this work is likely to include the development of both physical works and train service propositions. In all cases, it will be for promoters to agree the respective roles of rail industry and third party players early in the development of any propositions. We expect that Network Rail will bring to DFT’s attention issues that might involve DFT directly, for example where there is an impact on train services for which the Secretary of State is the franchising authority, or where there is a

material linkage with wider Westminster government public policy objectives (such as access to airports and freight access to major ports). In all such cases the DFT Rail Regional and Passenger Relations team will be able to advise on how best to involve DFT Rail; naturally advance warning of issues that might require DFT attention would be appreciated.

Local authorities assembling plans connected to local transport, local development and other issues should seek railway input from Network Rail and other rail industry parties. Network Rail will be able to advise on issues relating to railway operations and performance, technical issues and commercial and economic issues – in all issues from a ‘rail industry planning’ perspective. We expect that Network Rail will bring to DFT’s attention issues that might involve DFT directly. Network Rail has set up a national forum whereby stakeholders can review and make inputs to emerging policy with respect to planning – the Rail Industry Planning Group. This group is chaired by Paul Plummer, Director Planning and Regulation at Network Rail.

In England and Wales DFT is to continue to produce the Regional Planning Assessments (RPAs) which the SRA has initiated. The RPAs will form an input to DFT’s strategic rail planning and will also form a backdrop to industry plans such as Network Rail’s medium term Route Utilisation Strategies, and statutory plans such as Regional Spatial Strategies. Within DFT, this work will be led by the Rail Regional and Passenger Relations team under Stephen Clark.

DFT Rail will be well placed to make direct inputs to regional and sub-regional plans, and parties developing regional and sub-regional strategies will also want to ensure that railway industry input is sought from Network Rail and other players. DFT and Network Rail will both be able to contribute to regional and sub-regional fora which focus on transport and wider planning issues. Railway representation will depend on the nature of the remits of these various regional and sub-regional groupings.’



Of course, these intentions have to be realised again and again. The position of Network Rail on the edge of the public and private sphere and the stronger orientation regarding public values by DfT and on market values by Virgin however, does seem to be an advantage, more than a threat, in achieving these intentions.

#### 10.4 LESSONS ON HYBRID STRATEGIES IN THE FIELD OF INFRASTRUCTURE INVESTMENTS

Infrastructure development in many countries has primarily been the task of government. This is also the case in the Netherlands. The Department of Transport was responsible for the national highway and waterway systems, the provinces for the regional transport and waterway systems and the municipalities for local infrastructure. The investments in, as well as the maintenance and service operation of, rail systems were combined into one single public monopoly.

Nowadays, however, the infrastructure has become part of a large and complex system of elements in which the integration of different road systems, and the subsequent integration of these road systems with other means of transport, has become an important issue. Furthermore, the integration of infrastructure hardware and ICT systems has emerged as an important part of new investment strategies. If this process of multiple systems integration goes ahead – and I assume that this will be the case – effective infrastructure investments can only be generated by the joint efforts of a variety of parties, not only within the government system but also beyond the boundaries of the public and private domains. If investment decisions and operational decisions of any of the parties responsible for parts of the system affect the functioning of the whole system of transport, there is a greater incentive to match and attune decisions to achieve synergy. In this line of thinking a sharp division between public and private domains prevents parties from more effective infrastructure investment strategies.

In the private sector joint efforts in network configuration and chains of production are already well developed. Network management and alliance management are normal elements of investment strategies (Child, Faulkner and Tallman 2005). It could now be the moment that governments also have to participate in networks and chains of production. Alliances will become more important and the government's role will become more of a network manager. This role has to be combined with the traditional government role of a frontier guard between the public and private spheres. Governments that continue to only play this frontier guard role will no longer be able to develop the joint investment strategies needed to develop high-quality infrastructure investment programs.

In Western Europe, where a well-developed infrastructure already exists, investment strategies will be largely focused on the existing system. But it is much more than just building missing links into the existing framework. Take, for example, the cases of the A4 Midden Delfland and the A9/A6 link between Amsterdam and Almere. In both instances the resistance to any investment schemes was strong. For some, this meant that investments should be imple-

mented with more effort from the national governments.

Meanwhile, others thought that physical investments should be of such a high quality that resistance withers and support grows. In order to achieve investments of a higher quality a strategy of joint investment program development should be developed, as was the case for the West Coast Main Line. So many actors profited from the investment program that they were prepared to accept a short-term hindrance and loss of income.

In this other way of thinking, where the emergence of a network society is increasingly embraced, infrastructure development will be a joint activity of a variety of parties. The committee chaired by Riek Bakker, that gives advice to the Cabinet on integrated area development strategies, has already expressed concerns about the ability of local and regional governments to develop enough investment power.

“It is about a difficult and challenging job that goes beyond the boundaries of sectors and government.” “Het gaat om lastige en uitdagende opgaven die sectorale en bestuurlijke grenzen overschrijden”(Commissie Bakker 2005: 11).

The committee does incorporate the network characteristics of the investment task into their recommendations. They argue that investment strategies based on a partnership will consist of a variety of strategies, and the institutional one will not be the decisive one.

“Whatever the institutional arrangements turn out to be, the essence is a precise, committed and active governance strategy. Investments (in area development and infrastructure) require care, knowledge, guts, involved government, excellent communication skills, perseverance and the ability to mobilise support”. “Hoe de bestuurlijke inrichting ook is, het komt erop aan precies, gedreven en actief te sturen. Gebiedsontwikkeling vergt aandacht, inzicht, durf, verbindingskracht, excellente communicatieve vaardigheden, doorzettingsmacht en het vermogen om hulp te mobiliseren” (Commissie Bakker 2005:39).

Effective investment strategies stem from the paradigm of network management from partnership.

“Bestuurlijk partnerschap helpt de opgaven te bereiken”(Commissie Bakker 2005:43).

It is also clear that this network management approach has consequences for the behaviour of members of the government. The national government does not have much experience with investment program strategy based on partnership and multifunctional area development. Whatever experienced personnel were available, for instance, in Rijkswaterstaat, were either outsourced or have since retired.

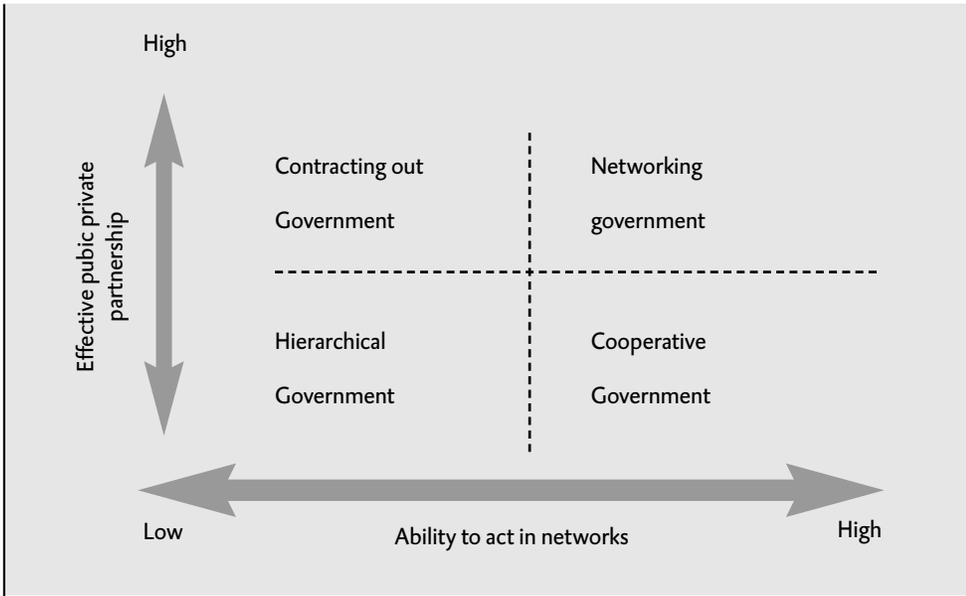
A variety of authors are dealing with the question of how effective governance strategies can be achieved in networks. As I have pointed out, the problem is not that organisations do not participate in networks. They clearly do. The problem is that many officials participating in networks are not able to develop partnerships due to the internal dynamics of the organisations they are part of. The process of transforming their own organisation into one that is able to operate effectively in networks has often not been sufficiently established. Governments still cherish the traditional ideas of primacy and centrality. Even if these ideas are not supported by real decision-making processes (which are based more on interactions between different varieties of investment decisions), the desire to (re)gain control will not simply disappear. I have seen this paradox over and over again.

The parliamentary committee that evaluated the decision-making on the High Speed Link and the Betuweline is just one example. The evaluations clearly pointed out that the cost overruns and delays were not caused by a lack of control by the Parliament, but by various kinds of unforeseen changes and circumstances in the complex network of parties in which the projects had to be implemented. It is highly unlikely that Parliament would have been able to foresee these problems and deal with them more effectively. Nevertheless, the committee proposed the development of more ex ante evaluation and control systems during implementation. This recommendation was implemented, but the only visible effect of this was that the following investment proposals were rejected by Parliament because the societal benefits could not be proven in advance. A new barrier to investment decision-making was created and the only result will probably be longer decision-making processes. It clearly did not help improve investment program strategies.

#### **10.4.1 CREATING NETWORK ORGANISATIONS: THE THEORIES OF GOLDSMITH AND EGGERS**

One of the first requirements needed in networks is the ability to restructure each organisation in such a way that it is able to participate in these networks. Organisations should be transformed into network organisations, which are able to act and react quickly to changes. Goldsmith and Eggers (2004) provide useful insights into the government's possible role in networks. Goldsmith himself is the former mayor of Indianapolis, which gave him a lot of practical experience in governing in networks. Even though the authors acknowledge the problems involved in managing networks, they continue to advocate the networking model. The current hierarchical model used by governments, they argue, is unable to meet the demands of complex and fast-changing societies. It is too divided, slow and internally oriented to develop multifunctional and multi-scale investment programs of high quality. "Today, increasingly complex societies force public officials to develop new models of governance." (idem: 7). The authors note that "It takes a network to fight a network." Of course, this is not an empirical proof of the need for network management, but it at least questions the traditional approach, especially when this approach is not able to deal with societal demands at all. And if

Figure 10.1



one looks at the quickly rising discrepancy between transport and mobility needs, on the one hand, and the facilities to meet these needs, on the other, this certainly seems to be the case.

Goldsmith and Egger postulate that Western governments are transforming from a hierarchical to a networking model. They foresee that a development in inter-governmental relations and contracting out will lead to networking governments capable of producing high-quality products that meet the demands of 21st century society. In their eyes, the Dutch debate regarding the bringing of activities that are contracted out or placed in private agencies back into government bureaucracy is a regressive move that prevents the government from dealing with the real question, namely how to govern networks (idem 2004:24). Based on my experience with infrastructure investments in the Netherlands over the last 20 years, I tend to agree with the authors. Effective investment strategies cannot be achieved by one single organisation. This was how it was in the past at, for instance, the Rijkswaterstaat. The power of the Rijkswaterstaat was well-known. It was even called a state within a state. But this power no longer exists. It has faded away due to societal changes (growing societal resistance toward purely technical solutions) and active reorganisations within national bureaucracies.

The way forward is for governments to set aside the traditional idea that they are the only ones in charge of infrastructure investments. They then have to begin to focus on improving their capacities to act in networks. They are thus faced with a new, more challenging role: as the manager of investment programs of a variety of parties.

The performance of one single organisation in a network or an inadequate relationship between two organisations in the network or chain can have a significantly negative impact on the output of the network as a whole. Network management entails the spotting of these problem areas and dealing with them. Governing in networks means bringing together and maintaining a set of specific abilities and skills for a long period of time. Dealing with (information) asymmetries in the network and differences in cultures will become an important part of investment program strategies, as is already the case with large multinational companies. Network conveners “must master the challenges of governing by networks: aligning goals, providing oversight, averting communication meltdown, co-ordination multiple partners, managing the tensions between competition and collaboration, and overcoming data deficits and capacity shortage.” (idem: 52).

Network governance mainly focuses on the integration of the large amount of investment initiatives already undertaken in existing (but poorly managed) networks. ‘Integrators must devise ways to establish communication channels, co-ordinate activities between network participants, share knowledge, align values and incentives, build trust, and overcome cultural differences.’ (idem:119). Effective investment strategies in the near future will not be the realisation of any standalone investment project as such, but more on the development of multi-functional investment programs in which all of the involved project managers have to show what their project’s added value is to the system as a whole. Network governance is about developing tools to understand and validate the interconnectedness between projects and establishing R&D teams that can help to provide increased synergy between all these investments.

The governance activities of these networks can only be performed beyond the boundaries of organisations in the public and private domains. It is obvious that this new investment strategy, despite the promise of multiple high-quality programs, will not be realised overnight. There are several pitfalls that will prevent governments from applying this network-oriented investment strategy (Goldsmith and Eggers, 2004:91).

First of all, governments will be guided by the way they are acting now. Their own history, way of working, organisational schemes and skills will be their starting point. Even if they try to develop multilevel, multifunctional and public-private investment programs, they will often run into traditional approaches. I can offer one example: Because the Central Planning Bureau can only make cost benefit analyses for single projects they tend to ignore the added value of program approaches.

Secondly, all governmental organisations tend to break down the challenge of transport system innovation into parts for which specialised groups (logistics, public transport, waterways) can be held responsible. This is the organising principle of bureaucracies. “What complex systems do is break down complex tasks into simple ones, deal with them as simple problems, and then aggregate these

solutions back together. Such a process, common to bureaucracy, assumes that aspect of problems can be treated in isolation from each other without endangering the overall solution.” (Ferlie, Lynn, and Pollitt 2005:63). Developing investment programs requires integration and connectivity, but governments are afraid of the ‘messiness’ that accompanies integration-oriented interactions between the various parties.

Thirdly, governments tend to think that partnership means that the other party will solve their problems, in other words, they pass the buck. This is not realistic. Partnership implies joint responsibilities, while the traditional audit systems focus solely on individual responsibility. In networks, governments will always have to take the initiative and responsibility, no matter how difficult the circumstances. It is always more challenging to make decisions in networks than in the isolation of one’s department office or even in Parliament. A new way of taking responsibility and being held accountable has to be developed in investment program approaches. “With authority and responsibility parcelled out throughout the network, the problem of accountability is one of the most difficult challenges of networked government” (Goldsmith and Eggers 2004:156).

In highly developed countries, it is much more important to develop combined projects that together contribute to the image of an area or country. Let’s look at the example of Dubai. The government was able to create and attach meaning to a major concept (becoming a high-quality centre for tourism) and set out in that direction, which led to the realisation of that very concept. A variety of organisations ended up synchronising their efforts so that real movement in that direction could take place. The governance of networks means formulating that concept in such a way that it fits in with the ambitions of society and provokes other public and private companies to develop ‘unsolicited’ proposals that fit in with these ambitions. In contrast, the idea of governing in networks as a sense-making, beyond just some money-spending, exercise is not well-developed in Dutch society.

## 10.5 CONCLUSIONS AND RECOMMENDATIONS

In this essay, I have dealt with the question of what kind of organisational context infrastructure investment takes place in, and what the consequences are for investment strategies. I have argued that infrastructure investments almost always take place in a hybrid context in which public and private parties participate. Public authorities often feel uncomfortable with hybridism. They tend to veer towards a clear and controllable organisational context that fits into the traditional models of public hierarchy or private competition over and over again. However they often end up with a new type of hybridism.

If this is the case, the question of effective organisation of investment processes is no longer about the divisions of tasks between the public and private domains. Instead, we have a question of how to organise interfaces between the domains,

of combining the advantages of public involvement that is dedicated to public values, and private involvement that is dedicated to innovation and efficiency. Organising interfaces is discussed in literature under a variety of names. In this essay, I use the term network governance. Network governance is a rather subtle activity. Officials have to be able to formulate and visualise their expectations explicitly. This allows others to understand what they have to do in order to gain support from these officials. The formulation, however, must be open enough to allow for creativity and unforeseen combinations. The result of a program-oriented investment strategy is much more than just realised projects, which was the main focus in the past. Joint visions of ‘who and what we want to become’ are extremely important.

If an investment program for a certain area aims to fulfil its ambitions of contributing to competitiveness and sustainability, it has to do more than just realising projects. It has to generate an image and a sense of joint responsibility for the area and its people. This image has to be established and to a certain degree adopted in a network beyond the boundaries of the departments in The Hague. “The process of joint sense-making is important for effective programs”. Goldsmith and Egger (2004: 156) argue that trust building is more important than working according to formal procedures. “Everything, including contracts, should be dynamic, not static, with opportunities for constant learning and adapting.” In order to meet these challenges governments should change, but not change in terms of reorganising their internal structures; instead they should change their way of looking at the infrastructure system and the existing interdependencies.

“Government needs people with new network skills – collaborative skills currently neither highly sought nor valued by government. Building such a capacity requires not only far-reaching training and recruitment strategies, but a full-blown cultural transformation.” (idem:178).

I think we can learn a lot from the WCML example in the UK and Goldsmith and Egger’s arguments. The problem with infrastructure investment strategies is not their lack of centralised power. There are more than enough authorities. It is much more a question of the inability to gather the actions of these authorities to create joint efforts in governance networks. We saw this in the case of British Rail and RailTrack where public and private companies suffer from similar problems. Public organisations that fail to invest in interfaces with others normally do not reduce their transaction costs. They just spend their time engaged in internal interactions. And it is not always clear to what extent this contributes significantly to better investment schemes and the realisation of capabilities. In the third round of the West Coast Main Line upgrade, the managers in charge used their energy to establish networks and seek out joint interests. The results are promising enough to use this case as an example for other program-oriented transport and location development investment strategies. Governments can possibly bear the risks of extensive R&D activities in joint efforts, which may

allow us to escape from the deadlock in the existing infrastructure system and debate. This is already the case in private industries where competitors join together to bear the high investment costs of product innovations.

## NOTES

- 1 This study is based on research activities performed by the network for the dissemination of knowledge on management and the organisation of Large Infrastructure Projects in Europe ([www.netlipse.eu](http://www.netlipse.eu)).
- 2 The italicized texts between quotation marks are quotes from our respondents. We talked with all of the major actors in the field and made a substantial evaluation report. This paper gives a brief summary of that report.

## BIBLIOGRAPHY

- Alter, C., J. Hage (1993) *Organizations Working Together*, Newbury Park: Sage.
- Axelrod, R. (1984) *The Evolution of Co-operation*, New York: Basic Books.
- Borys, B., D.B. Jemison (1989) 'Hybrid arrangements as strategic alliances: theoretical issues in organizational combinations', *Academy of Management Review*, vol. 14, no. 2.
- Bruijn, H. de, E.F. Ten Heuvelhof, R.J. in 't Veld (1998) *Procesmanagement; over procesontwerpen en besluitvorming* [procesmanagement, about designing processes and decision making], Schoonhoven: Academic Services.
- Castells. M. (2000, first edition 1996) *The Rise of the Network Society: Economy, Society and Culture*, Cambridge: Blackwell Publishers.
- Commissie Bakker (2005) *Ontwikkel kracht, eindrapport van de Adviescommissie Gebiedsontwikkeling*.
- Child J., D. Faulkner and S. Tallman (2005) *Co-operative Strategy; Managing Networks, and Joint Ventures*, Oxford: Oxford University Press.
- Deakin, S., J. Michie (eds.) (1997) *Contract, Co-operation, and competition; studies in economics, management and law*, Oxford: Oxford University Press.
- Falconer, P.K., K. McLaughlin (2000) 'Public-Private Partnerships and the 'New Labour' government in Britain', in: Osborne (ed.).
- Faulkner, D. (1995) *International strategic alliances*, McGraw Hill Book Company.
- Ferlie, Lynn, Pollitt (2005) *The Oxford Handbook of Public Management*.
- Goldsmith S., W.D. Eggers (2004) *Governing by Networks, the new shape of the public sector*, Washington, DC: Brookings Institution.
- Graeber G. (1993) *The embedded firm; understanding networks: actors, resources and processes in interfirm co-operation*, London: Routledge.
- Jacobs, J. (1992) *Systems of Survival, a dialogue on moral foundations of commerce and politics*, New York: Random House.
- Kenniscentrum (1998) Ministry of Finance, Projectbureau PPS (1998), *Eindrapport Meer Waarde door samen Werken* (Final report on More value through co-operation), The Hague.
- Kenniscentrum (1999) Ministerie van Financien (1999), *Kenniscentrum Publiek-Private Samenwerking, Voortgangsrapportage PPS*, April 1999.
- Klijn, E.H., E. van Bueren, J.F.M. Koppenjan (2000) *Spelen met onzekerheid; over diffuse besluitvorming in beleidsnetwerken en mogelijkheden voor management*, Delft: Eburon.
- Klijn, E.H., G.R. Teisman, (2000) 'Governing Public-Private Partnerships; analysing and managing the processes and institutional characteristics of public-private partnerships', in: Osborne (ed.).
- Kouwenhoven, V.P (1991) *Publiek-private samenwerking: mode of model?*, Delft.
- Lane, C., R. Bachman (1998) *Trust within and between organizations; conceptual issues and empirical applications*, Oxford: Oxford University Press.
- Lundvall, B.A. (1993) 'Explaining interfirm cooperation; limits of the transaction-cost approach', in: Graebner (ed.).
- Miles, R.E., C.C. Snow, (1986) 'Organization: new concepts for new forms', *California Management Review*, vol. 28, no. 3.

- Milward H. Brinton, K.G. Provan (2000) 'Governing the hollow state, *Journal of public Administration Research and Theory*', vol. 10 no. 2 pp. 359-379.
- Ministry of Finance (1998) *Final report of the MDW Working Party on Market and Government*, The Hague.
- Nooteboom, B. (1998) *Management van Partnerships* [The Management of partnerships], Schoonhoven: Academic Services.
- Osborne, S.P. (ed.) (2000) *Public-Private Partnerships; theory and practice in international perspective*, London: Routledge.
- Parlementaire Enquete Commissie Bouwnijverheid (2002/2003).
- Rogers, D.L., D.A. Whetten (1982) *Interorganizational coordination: theory, research and implementation*, Iowa State University Press.
- Scharpf, F.W. (1978) *Interorganizational policy studies: issues, concepts and perspectives*.
- Scharpf, F.W. (1997) *Games real actors play; actor-centred institutionalism in policy research*, Boulder, CO: Westview Press.
- Scott, W.R. (1995) *Institutions and organizations*, Thousand Oaks, CA: Sage.
- Simon, M. (1990) *De strategische functietypologie*, The Hague: Sdu.
- Teisman, G.R. (1992/1995/1998) *Complexe besluitvorming; een pluricentrisch perspectief op besluitvorming over infrastructuur*, The Hague: Vuga.
- Teisman, G.R. (1997) *Sturen via creatieve concurrentie*, Nijmegen: Katholieke Universiteit Nijmegen.
- Teisman, G.R. (2005) *Publiek management op de grens van chaos en orde*, The Hague: Academic Services.
- Veld, R.J. in 't (1991) *Spelen met vuur, over hybride organisaties*, The Hague: Vuga.
- Veld, R.J. in 't (1997) *Noorderlicht; over scheiding en samenballing*, The Hague: Vuga.
- Williamson, O.E. (1996) *The Mechanisms of Governance*, Oxford: Oxford University Press.

## 11 CONCESSIESTELSEL EN OVERHEIDSAANDEELHOUDERSCHAP

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### 11.1 INLEIDING

#### 11.1.1 TE HOGE TARIEVEN

In mei 2007 oordeelde de Nederlandse Mededingingsautoriteit (NMa) dat de consument in 2004 en 2005 jaarlijks € 31,- meer had betaald voor energietransport dan de toezichthouder redelijk achtte (website NMa). De vier grote energiebedrijven hadden € 400 miljoen aan overwinst behaald. In een reactie op dit bericht zei minister van Economische Zaken, Van der Hoeven, dat zij hieraan niks kan doen. Per 1 januari 2008 gaat een nieuwe reguleringsperiode in waarin de NMa de tarieven strenger zal reguleren. Desgevraagd geeft de minister aan dat zij geen bevoegdheden heeft om deze situatie voor de jaren 2006 en 2007 te corrigeren (Tweede Kamer 2006-2007, 30212, nr. 57: 3). Ze geeft aan met de aandeelhouders van de energiebedrijven (gemeenten en provincies) te zullen overleggen over het eventueel compenseren van de consumenten.

Uit bovenstaande casus blijkt dat de minister geen bevoegdheden heeft om in te grijpen. Dit is opmerkelijk gezien de publieke belangen die een rol spelen in de energiesector. Voor realisering van publieke belangen is de overheid immers verantwoordelijk (meer over het begrip publieke belangen hieronder in paragraaf 11.1.2). Zowel op Europees als op nationaal niveau is vastgesteld dat leveringszekerheid, continuïteit van de energievoorziening en het betalen van een redelijke prijs door de consument (onder andere) doelen van de regulering zijn. Uit het gegeven voorbeeld blijkt dat de bevoegdheden van de minister tekortschieten om deze publieke belangen te borgen als er iets misgaat. In dit essay wordt bezien of een concessiestelsel en overheidsaandeelhouderschap geschikte instrumenten kunnen zijn om publieke belangen, meer in het bijzonder het investeren in infrastructuur, te borgen.

#### 11.1.2 ACHTERGROND

In de afgelopen decennia is een spreekwoordelijke golf van liberalisering en/of privatisering over een aantal voorheen publieke sectoren gespoeld. Voorbeelden hiervan zijn de telecommunicatie-, energie-, zorg- en openbaar vervoersector.

Over de invulling van het begrip 'privatisering' wordt in verschillende wetenschappelijke disciplines verschillend gedacht. De zuiver juridische benadering is gericht op de juridische eigendom van de rechtspersoon die de betrokken activiteit uitoefent. Het kabinet-Kok II kiest voor deze benadering en definieert privatisering als "afstoting van eigendom door de overheid; het juridische eigen-

dom van ondernemingen komt in private handen” (*Nota Publieke belangen en marktordening*: Tweede Kamer 1999-2000, 27018, nr. 1: 17). Sindsdien is er door kabinetten niet expliciet van deze nota afgeweken. Onder economen is het gebruikelijker zich niet te laten leiden door de juridische vormgeving. Zij hechten meer belang aan de feitelijke situatie. Zo spreken Bovenberg en Teulings van privatisering wanneer de overheid de residuele beslissingsbevoegdheid uit handen geeft. “Daarbij is van belang dat de overheid zich geloofwaardig bindt om niet te interveniëren” (Bovenberg & Teulings 2000: 304). In de Verenigde Staten wordt privatisering in een nog ruimere betekenis gebruikt: “any process, that is aimed at shifting functions and responsibilities, in whole or in part, from the government to the private sector through such activities as contracting out or asset sales” (Huygen 2000: D-10). Ook de WRR hanteert een ruime betekenis: “Het inschakelen van private partijen bij het realiseren van publieke belangen” (WRR 2000: 25). In dit essay wordt uitgegaan van de juridische en naar mijn mening meest scherpe definitie zoals ook door het kabinet wordt gehanteerd: het overgaan van juridische eigendom van de overheid naar private partijen.

Het begrip ‘liberalisering’ is minder omstreden. Het kabinet-Kok II verstaat onder liberalisering “het introduceren van concurrentieprikkels” (*Nota Publieke belangen en marktordening*: Tweede Kamer 1999-2000, 27018, nr. 1: 7). Liberalisering hoeft niet per se samen te gaan met privatisering in hiervoor bedoelde zin. Zo kan een staatsbedrijf worden geprivatiseerd en monopolist blijven en kunnen bij publieke organisaties ook concurrentieprikkels worden ingebouwd.

Aanvankelijk was het vertrouwen dat werd gesteld in de ‘onzichtbare hand’ (Smith 1776) van de markt groot. Het marktmechanisme zou allerlei gedetailleerde bureaucratische regelgeving overbodig maken: vraag en aanbod zouden elkaar vanzelf vinden en leiden tot het optimale resultaat. De afgelopen jaren is dit enthousiasme iets getemperd. Men heeft zich gerealiseerd dat de introductie van marktwerking onder omstandigheden gepaard moet gaan met nieuwe regels en op de markt toegesneden instrumenten voor de overheid om publieke belangen te kunnen borgen.

Eén type sector waarin zich na liberalisering en privatisering complicaties hebben voorgedaan, is het type infrastructuur-gebonden sector. In dit essay wordt daarmee bedoeld op sectoren waarin de goederen en diensten worden aangeboden en afgenomen via een fysiek netwerk van kabels, pijpen of leidingen, zoals bijvoorbeeld in de energie- en in de drinkwatersector.

In deze sectoren spelen publieke belangen een grote rol. Voordat op de aard en oorzaak van deze rol wordt ingegaan, wordt toegelicht wat hier onder publieke belangen wordt verstaan. In de literatuur wordt een belangrijk onderscheid gemaakt tussen de ‘wat-vraag’ en de ‘hoe-vraag’ met betrekking tot publieke belangen (WRR 2000: 17-19). Een belang is een publiek belang als het voor de maatschappij als geheel van belang is én de politiek ervan overtuigd is dat de realisatie ervan overheidsbemoeienis vereist. De vraag wat een publiek belang

is, wordt derhalve door de politiek beantwoord (zie voor een andere, economische benadering: Teulings, Bovenberg en Van Dalen 2003). Op de vraag hoe, met behulp van welke instrumenten, het door de politiek bepaalde publieke belang het best kan worden gerealiseerd, kan vanuit verschillende wetenschappelijke invalshoeken een mogelijk antwoord worden gegeven. Dit essay gaat niet in op de wat-vraag naar het publieke belang in kwestie. De beantwoording van die vraag wordt overgelaten aan de politiek. Hoewel het mogelijk is om op grond van de kenmerken van een staat een harde kern van publieke taken van de overheid te ontwaren – bijvoorbeeld het geweldsmonopolie –, kunnen vanuit een juridische invalshoek verder in zeer beperkte mate uitspraken worden gedaan over wat wel en niet van publiek belang is of zou moeten zijn. Naast deze harde kern worden publieke belangen in een democratische rechtsstaat vastgesteld door middel van democratische besluitvorming (Vermeulen 2003: 22-26). Het is derhalve de hoe-vraag, de vraag naar welke instrumenten de wetgever zou moeten gebruiken, die hier centraal staat. In deze bijdrage worden twee instrumenten uitgelicht: een concessiestelsel en overheidsaandeelhouderschap. De hoe-vraag kan in het kader van dit essay als volgt worden geformuleerd. Gesteld dat de wetgever wil bewerkstelligen dat wordt geïnvesteerd in infrastructuur: kan de wetgever dit doel bereiken met een concessiestelsel respectievelijk overheidsaandeelhouderschap en onder welke voorwaarden?

Het nader bezien van juist deze twee instrumenten is ingegeven door verschillende motieven. Overheidsaandeelhouderschap komt vaker voor in infrastructuur-gebonden sectoren. Deze eigendomsvorm lijkt een grote macht voor de overheid te impliceren, maar in de praktijk ligt dat soms anders (zie bijvoorbeeld de casus in paragraaf 11.1). Concessies worden als instrument ingezet in de openbaar vervoersector. Dit roept de vraag op of de concessie ook een rol zou kunnen spelen in andere infrastructuur-gebonden sectoren. Deze observaties leiden ertoe om juist deze twee instrumenten uit te kiezen.

De reden dat publieke belangen een grote rol spelen heeft te maken met het infrastructuur-gebonden karakter van deze sectoren hetgeen doorgaans een natuurlijk of wettelijk monopolie oplevert. De consument is dan niet in staat te kiezen uit verschillende aanbieders. Het is een publiek belang dat deze ‘gebonden consument’ wordt beschermd tegen de machtspositie van de monopolistische aanbieder (*Nota Publieke belangen en marktordening*: Tweede Kamer 1999-2000, 27018, nr. 1: 9). Daarom stelt de overheid bepaalde voorwaarden waaraan deze aanbieder moet voldoen. Zo is er bijvoorbeeld in de Elektriciteitswet 1998 een leveringsplicht opgenomen voor leveranciers van elektriciteit. Zij zijn gehouden om aan iedere kleinverbruiker die daarom verzoekt tegen redelijke voorwaarden en tarieven elektriciteit te leveren (art. 95b Elektriciteitswet 1998).

De dominante rol van publieke belangen in infrastructuur-gebonden sectoren houdt anderzijds ook verband met het feit dat de burger en de maatschappij in veel van deze sectoren sterk afhankelijk zijn van de geboden goederen en diensten.

Soms gaat het zelfs om een eerste levensbehoefte, zoals in het geval van drinkwater. Het investeren in infrastructuur, door deze goed te onderhouden en waar nodig uit te breiden of te innoveren is daarom ook een prominent publiek belang. Dit publiek belang dient uiteindelijk de nog algemener geformuleerde publieke belangen leveringszekerheid en continuïteit van de dienstverlening (*Nota Publieke belangen en marktordering*: Tweede Kamer 1999-2000, 27018, nr. 1: 9).

In bepaalde infrastructuur-gebonden sectoren is het liberaliserings- en privatiseringsproces zeer ver gevorderd, zoals in de telecommunicatiesector. In andere sectoren zijn er ondernemingen die inmiddels vennootschappen zijn, maar waarin alle aandelen door de staat of door lagere overheden worden gehouden. Deze ondernemingen zijn derhalve nog niet geprivatiseerd. Het werd destijds gezien als een logische tussenstap op weg naar privatisering om de overheidsbedrijven om te zetten in overheidsvennootschappen. Op termijn zouden de aandelen worden verkocht aan private partijen. Inmiddels zijn de ideeën hierover iets bijgesteld. Zo gaan in de politiek stemmen op om voorzichtiger om te springen met de introductie van marktwerking en privatisering in publieke sectoren (Kamerdebat over marktwerking in de publieke sector 30 mei 2007).

Om publieke belangen te borgen zijn er allerlei verschillende juridische instrumenten beschikbaar waaruit de wetgever kan kiezen. Onder het begrip 'juridische instrumenten' wordt hier verstaan: de juridische bevoegdheden die een bestuursorgaan ter beschikking staan om op een of andere wijze in te grijpen in een sector. Ten eerste kan besloten worden dat het publieke belang niet door de overheid zelf, maar door een andere organisatie kan worden behartigd. Instrumenten die haar ter beschikking staan zijn bijvoorbeeld een concessiestelsel of een vergunningstelsel. Als de overheid van oordeel is dat zij zelf geroepen is om de taak uit te voeren, is er een aantal instrumenten waaruit zij kan kiezen. Te denken valt aan (al dan niet volledig) overheidsaandeelhouderschap, een (sector-specifieke) toezichthouder, algemene regelgeving, de bevoegdheid voor een minister om bindende aanwijzingen te geven enzovoorts. Het kan hierbij gaan om instrumenten die in het privaatrecht of in het publiekrecht geworteld zijn.

### 11.1.3 AANPAK EN PROBLEEMSTELLING

In dit essay wordt een juridisch-instrumentele invalshoek gehanteerd en geredeneerd vanuit de benadering van de wetgever. Er worden twee instrumenten om publieke belangen te borgen, te weten een concessiestelsel en overheidsaandeelhouderschap, beschreven en geanalyseerd waarbij bijzondere aandacht wordt besteed aan de mogelijkheden voor investeringen in de infrastructuur.

Ten eerste wordt een situatie beschreven waarin de overheid periodiek een concessie verleent aan een beheerder van infrastructuur die daarin investeert en waarbij de concessiehouder een private onderneming is. Deze onderneming verdient zijn investeringen gedurende de looptijd van het contract (veelal twintig tot dertig jaar) weer terug. In Nederland is slechts zeer recent ervaring opgedaan

in infrastructuur-gebonden sectoren met het instrument concessie. Daarom zal voor deze beschrijving ook aansluiting worden gezocht bij de Franse, veel oudere, concessiepraktijk met betrekking tot investeringen in infrastructuur. Ten tweede wordt ingegaan op de situatie waarin de centrale overheid/decentrale overheden enig aandeelhouder is/zijn van een onderneming die infrastructuur in eigendom heeft en beheert. Deze situatie treft men nu aan bij TenneT (100% van de staat), de landelijke netbeheerder van het hoogspanningsnet, en de beheerders van de regionale elektriciteitsnetten (100% van verscheidene provincies en gemeenten).

Deze twee instrumenten staan niet op zichzelf. Zij worden ingezet in een sector waarin een aantal verschillende door de wetgever gecreëerde juridische instrumenten tegelijk een rol spelen. Zo is er naast overheidsaandeelhouderschap in een sector in het algemeen ook sprake van een bepaalde vorm van toezicht. Daarnaast zijn de belangen van de verschillende actoren in een sector en hun bijbehorend strategisch gedrag ook bepalend voor het realiseren van publieke belangen. Omdat veel instrumenten van uiteenlopende aard een rol spelen, komt het in de praktijk niet neer op een zwart-witkeuze tussen het ene of het andere instrument. Ondanks deze nuancering is het zinvol om de afzonderlijke instrumenten op hun merites te beoordelen.

Bij deze analyse wordt ingegaan op de gevolgen die de keuze voor een van beide juridische instrumenten heeft voor de mate van mogelijke beïnvloeding door de overheid, en daarmee voor het borgen van de publieke belangen van leveringszekerheid en continuïteit; en tegelijk het publieke belang van efficiënt functioneren. Enerzijds moet de overheid genoeg beïnvloedingsmogelijkheden hebben als er iets grondig misgaat, anderzijds moet de politieke waan van de dag niet de overhand kunnen krijgen.

De probleemstelling luidt: is het voor de overheid zinvol om bij de regulering van infrastructuur gebruik te maken van een concessiestelsel dan wel publiek aandeelhouderschap, mede in het licht van de borging van het publieke belang van het doen van investeringen?

Deze probleemstelling valt uiteen in de volgende vragen. Wat houden een concessiestelsel respectievelijk overheidsaandeelhouderschap precies in? Welke beïnvloedingsmogelijkheden voor de overheid zijn er bij deze instrumenten? Wat zijn de consequenties van deze beïnvloedingsmogelijkheden voor de geschiktheid van de instrumenten? Om deze vragen te beantwoorden zal ik de belangrijkste overeenkomsten en verschillen van de twee instrumenten in kaart brengen.

#### 11.1.4 LEESWIJZER

Hieronder wordt in paragraaf 11.2 eerst een juridische beschrijving gegeven van het Nederlandse concessiestelsel, waarna aandacht wordt besteed aan het Franse concessiestelsel. Aan het eind van deze paragraaf worden de beïnvloedingsmogelijkheden voor de overheid in een concessiestelsel geanalyseerd. Daarna wordt in

paragraaf 11.3 ingegaan op het instrument overheidsaandeelhouderschap door een beschrijving van het juridische systeem daarvan. Vervolgens worden ook daarvan de beïnvloedingsmogelijkheden geanalyseerd. Tot slot worden in paragraaf 11.4 de bevindingen gepresenteerd.

## 11.2 CONCESSIES

### 11.2.1 INLEIDING

In de Nederlandse infrastructuur-gebonden sectoren wordt de concessie (nog) niet op grote schaal ingezet als instrument om het beheer, waaronder ook investeringen moeten worden begrepen, van infrastructuur te reguleren. Daarom wordt in dit hoofdstuk ook aansluiting gezocht bij het Franse equivalent van de concessie. In Frankrijk bestaat ruime ervaring met het gebruik van concessies ten aanzien van het beheer van de infrastructuur, onder meer in de drink- en afvalwatersector. Wat betreft materiële kenmerken komen de Franse en de Nederlandse concessie sterk overeen, zoals hieronder zal blijken. Wel moet steeds in het oog worden gehouden dat het Franse (bestuurs)rechtssysteem op een aantal punten sterk verschilt van het Nederlandse. Ondanks deze verschillen is het zinvol om kennis te nemen van het Franse systeem en te bezien waar dat interessante aanknopingspunten biedt voor het gebruik van de concessie in infrastructuur-gebonden sectoren in Nederland.

Hieronder wordt eerst ingegaan op de kenmerken van een Nederlands concessiestelsel. Daarbij worden concessies in het stads- en streekvervoer en een concessie in de afvalwatersector gebruikt als illustraties. Daarna wordt ingegaan op het Franse stelsel, waarbij de concessie in de drink- en afvalwatersector als illustratie dient. Ten slotte wordt ingegaan op de beïnvloedingsmogelijkheden voor de overheid.

### 11.2.2 CONCESSIES IN NEDERLAND

#### *De Nederlandse concessie in juridisch perspectief*

Het etiket 'concessie' wordt in de praktijk op tal van uiteenlopende juridische figuren geplakt. Veelal is de kern van een concessie dat een overheidsorgaan aan een private onderneming het exclusieve recht verleent om een bepaalde dienst te verlenen of een bepaald goed te realiseren. Juridische analyse heeft het volgende materiële begrip van de concessie opgeleverd. Een concessie is een recht dat door een bestuursorgaan wordt verleend aan een onderneming om activiteiten te verrichten die in het algemeen belang worden geacht. De onderneming draagt het exploitatierisico en is tevens verplicht om de geconcedeerde activiteit uit te oefenen (vrij naar Dankers-Hagenaars 2000: 373; Nijhof 2000: 124). Het bestuursorgaan is de concessieverlener en de onderneming is de concessiehouder.

In dit essay wordt ervan uitgegaan dat er een bewuste keuze voor een concessie wordt gemaakt door de (formele of materiële) wetgever. De bevoegdheid tot het

verlenen van een concessie heeft dan ook een wettelijke basis. Vanwege (onder meer) deze wettelijke basis is er sprake van een publiekrechtelijk en niet van een privaatrechtelijk instrument.

De conclusie dat de wettelijke concessie een eenzijdige beschikking in de zin van de Algemene wet bestuursrecht inhoudt (Dankers-Hagenaars: 274) doet echter geen recht aan het feit dat de concessie een tweezijdig karakter kent. Het laat zich moeilijk denken dat een concessie eenzijdig en zonder toestemming van de aanstaande concessiehouder wordt opgelegd. Het geheel van concessieverlening en -aanvaarding kan goed omschreven worden als 'publiekrechtelijke overeenkomst' (Nijhof 2000: 308-309; Van Ommeren 1987: 342; Van Ommeren 2005: 185; anders Dankers-Hagenaars 2000: 260-266).

De bestuursrechter is het aangewezen forum voor geschillen over de concessie, voor zover het om een besluit in de zin van de Algemene wet bestuursrecht zou gaan. Vanwege het tweezijdige karakter van de concessie kan echter ook worden bepleit dat zij moet worden aangemerkt als een overeenkomst en dat derhalve de burgerlijke rechter aangewezen is om over geschillen te oordelen. In de wet is expliciet bepaald dat de openbaar vervoerconcessie tot de bevoegdheid van de bestuursrechter behoort (art. 105 Wet personenvervoer 2000).

De concessie is een van de vele instrumenten waarmee publieke belangen kunnen worden geborgd. Het is vaak niet het enige instrument dat ten aanzien van de betrokken concessiehouder of in een bepaalde sector wordt ingezet, zoals hierboven al werd besproken (paragraaf 11.3). Het is onderdeel van de bredere *governance*, het geheel van institutionele arrangementen bestaand uit instrumenten die zowel privaats- als publiekrechtelijk van aard kunnen zijn. Naast de regels die voortvloeien uit de concessie gelden bijvoorbeeld ook algemene regels die van overheidswege worden gehandhaafd. Er kan op grond van de wet ook een vergunning vereist zijn of zelfs tegelijkertijd sprake zijn van overheidsaandeelhouderschap.

Omdat in dit essay wordt geredeneerd vanuit het perspectief van de wetgever, wordt er uitgegaan van een concessie die haar grondslag heeft in een wet in formele zin, de zogenaamde wettelijke concessie. Bij of krachtens de wet wordt het bestuursorgaan dat de concessie verleent, aangewezen.

Van kenmerkend belang voor een concessie is dat het exploitatierisico voor rekening van de concessiehouder komt. De concessiehouder verkrijgt zijn inkomsten uit de betaling van de gebruikers. Dit is een onderscheidend kenmerk van een ander type contract waarbij de overheid rechtstreeks betaalt voor de geleverde diensten. Het risico wordt bij de onderneming gelegd en dit biedt een prikkel aan de onderneming om zo efficiënt mogelijk te presteren. Dat levert immers de meeste winst op. Tegelijk brengt dit met zich mee dat er gelegenheid moet zijn voor de concessiehouder om zijn investeringen terug te verdienen. Dit betekent onder meer dat de concessie een voldoende lange looptijd moet hebben om rendabel te zijn voor een onderneming.

Een belangrijk kenmerk van de wettelijke concessie is dat deze in principe volledig door de wetgever kan worden vormgegeven. Dit maakt de concessie tot een flexibel instrument. De wetgever is uiteraard wel gehouden aan Europees recht dat op de concessieverlening van toepassing kan zijn. Hierbij moet worden gedacht aan de Europese aanbestedingsregels en het EG-Verdrag, in het bijzonder de regels aangaande de vier vrijheden en de mededingings- en staatssteunregels. Wel geldt voor diensten die worden geboden in infrastructuur-gebonden sectoren dat zij onder het Europese recht kunnen worden gezien als diensten van algemeen economisch belang, waardoor bepaalde Europese regels niet van toepassing zijn (art. 86 lid 2 EG-Verdrag). Deze regelgeving kan per sector verschillen. Hier zal niet worden ingegaan op de specifieke regels die gelden per sector, aangezien dit buiten het kader van deze bijdrage valt.

De vrijheid van de wetgever geldt ten eerste voor de wijze van verlening van de concessie. De wetgever kan bijvoorbeeld beslissen dat een concessie periodiek moet worden aanbesteed door de concessieverlener. Er is dan sprake van concurrentie om de markt waarbij het netwerk periodiek betwistbaar wordt gesteld (*Nota Publieke belangen en marktordening*: Tweede Kamer 1999-2000, 27018, nr. 1: 22). Een voordeel dat kan worden behaald door een concessie periodiek aan te laten besteden, is dat marktwerking kan leiden tot grotere efficiëntie dan wanneer de concessie zonder concurrentie vooraf aan een bepaalde partij wordt gegund.

Ten aanzien van de inhoud van de concessie is de wetgever ook vrij. De wetgever kan bepalen of en in welke mate de concessieverlener over discretionaire bevoegdheid beschikt bij het bepalen van de inhoud van de concessie en onder welke voorwaarden een concessie kan worden verleend, gewijzigd of ingetrokken. Een van de argumenten vóór concessieverlening tegenover uitvoering door de overheid zelf is dat een private onderneming veel beter is toegerust om een bepaald goed te realiseren of een bepaalde dienst aan te bieden vanwege diens expertise. Om deze reden is het van groot belang dat de wetgever ruimte laat voor de concessieverlener om een op maat gesneden oplossing mogelijk te maken. Er schuilt evenwel een gevaar in een concessiestelsel dat, zoals wel in het openbaar vervoer pleegt te gebeuren, de concessieverlener de concessie van tevoren volledig 'dichttimert'. Dit heeft tot gevolg dat de expertise van de concessiehouder ten aanzien van bijvoorbeeld de ontwikkelfunctie van het openbaar vervoer weinig meer toe kan voegen. De wetgever zou hierop kunnen anticiperen door te bepalen dat de ontwikkelfunctie primair bij de concessiehouder, in casu de vervoerder, ligt.

Omdat de wetgever veel vrijheid geniet, is niet zwart-wit te zeggen welke mogelijkheden de concessie precies biedt voor investeringen en welke gevolgen het gebruik van een concessiestelsel heeft. Wel kan bepaald worden welke voorwaarden of invulling er juist wel of niet aan een concessie zou moeten worden gegeven. Zo is van het grootste belang dat, als de concessiehouder investeert in infrastructuur, goed wordt afgesproken en gecontroleerd dat de infrastructuur

goed wordt onderhouden. Daarnaast is van belang dat de infrastructuur uiteindelijk wel in publieke handen terugkeert. Ook daarover moeten goede afspraken worden gemaakt.

Een ander gevaar van uitbesteden van taken door de overheid is dat de expertise bij diezelfde overheid afneemt. Ook dit gevaar moet onder ogen worden gezien. Er zal door uitbestedende overheden dan ook altijd gewerkt en geïnvesteerd moeten worden om de eigen expertise op peil te houden, zodat als er iets misgaat het overheidsorgaan goed weet wat er allemaal speelt. Omdat het zou kunnen dat bij een overheidsorgaan bij een concessie met een lange looptijd na verloop van tijd geen prikkel meer aanwezig is tot het investeren in expertise, verdient het de aanbeveling dat de wetgever voorzieningen treft om het kennisniveau bij de concessieverlener te handhaven.

### ***De concessie in het stads- en streekvervoer***

In Nederland wordt de periodiek aan te besteden concessie ingezet in het stads- en streekvervoer. Hoewel het in die sector niet zozeer gaat om harde infrastructuur zoals kabels en leidingen, is toch een belangrijke parallel te trekken. In verschillende regio's in Nederland wordt elke acht jaar opnieuw een concessie aanbesteed. Om mee te dingen naar een concessie moet een vervoerder beschikken over een vergunning van de minister van Verkeer en Waterstaat voor het verrichten van openbaar personenvervoer. Voor het verkrijgen van deze vergunning moet een onderneming voldoen aan de eisen van betrouwbaarheid, kredietwaardigheid en vakbekwaamheid. Daarnaast gelden nog algemene regels op grond van de Wet personenvervoer 2000 voor de concessiehouders. De concessiehouder is bij uitsluiting bevoegd en ook verplicht om openbaar vervoer te verrichten in de betreffende regio in overeenstemming met de verleende concessie. De concessiehouder investeert zelf in het eigen materieel en personeel. Aan het einde van de concessieperiode is de nieuwe concessiehouder op grond van de wet verplicht om het personeel van de oude concessiehouder over te nemen (art. 37 Wet personenvervoer 2000). Tevens bestaat de mogelijkheid om het materieel over te dragen. Ook bij het concessiestelsel in het stads- en streekvervoer zijn derhalve voorzieningen getroffen met betrekking tot de gedane investeringen.

### ***De concessie Harnaschpolder***

Een recent voorbeeld van een concessiecontract in een infrastructuur-gebonden sector is de concessie Harnaschpolder. Tussen het Hoogheemraadschap Delfland en Delfluent B.V. is in 2003 een concessiecontract gesloten in verband met het bouwen en beheren van een afvalwaterzuiveringsinstallatie in de Harnaschpolder. De concessie heeft een looptijd van dertig jaar. Delfluent heeft zich verplicht om de afvalwaterzuiveringsinstallatie te bouwen. Inmiddels is de bouw van de installatie voltooid. Vervolgens zal Delfluent het afvalwater gaan zuiveren en ontvangt zij opbrengsten van de consumenten. Hoewel er nog weinig informatie bekend is, gezien het feit dat de installatie nog maar net in gebruik is, is door sommigen al geconstateerd dat het een succes is, mede omdat Delfluent nog effi-

ciënter functioneert dan verwacht (interview met directeur Delfluent, website ministerie van Financiën). Dit heeft er onder meer mee te maken dat een van de deelnemers in Delfluent wereldwijd dit soort installaties realiseert en een kostenbesparing heeft gerealiseerd. Bovendien is een kenmerk van deze concessieverlening dat het overheidsorgaan heeft aangegeven wat zij wilde, en dat de concessiehouder heeft uitgewerkt hoe dat moet worden gerealiseerd (informatie ontleend aan de websites van het ministerie van Financiën, Delfluent B.V. en het Hoogheemraadschap Delfland).

### 11.2.3 CONCESSIONS IN FRANKRIJK

#### **System**

Uniek aan het Franse systeem is dat de gemeenten van oudsher een ruime discretionaire bevoegdheid hebben bij het organiseren van publieke taken. Zij kunnen ervoor kiezen om een publieke taak zelf uit te voeren, deze onder te brengen in een publiekrechtelijke rechtspersoon of uit te besteden aan een private rechtspersoon op grond van artikel 72 van de Franse grondwet (Huet & Saussier 2003: 409).

Deze uitbesteding kan op verschillende manieren plaatsvinden. De gemeente kan ten eerste een *gérance*-contract sluiten, waarbij een onderneming de publieke taak uitvoert en een vast bedrag betaald krijgt door de gemeente. Daarnaast zijn er nog drie contractuele arrangementen waarbij de opbrengst voor de onderneming in toenemende mate afhankelijk wordt gemaakt van diens prestaties. Bij deze drie contracten komt het risico derhalve steeds meer voor rekening van de onderneming. De *affermage* (vertaald: het pachten), ook wel leasecontract, impliceert een gedeelde verantwoordelijkheid van onderneming en publiekrechtelijke rechtspersoon. Bij de *régie intéressée* komt een deel van de investeringen voor rekening van de onderneming, waarbij de belangrijkste investeringen overigens publiek blijven. De onderneming is voor haar inkomsten rechtstreeks afhankelijk van de bijdragen van de klanten. Tot slot is er de *concession de service public*, waarbij de onderneming een groter risico draagt, omdat zij verantwoordelijk is voor alle investeringen gedurende de contractperiode. Aan het einde van deze periode worden de activa overgedragen aan de publiekrechtelijke rechtspersoon (Huet & Saussier 2003: 406-407).

In de Franse doctrine over overeenkomsten met de overheid wordt onderscheid gemaakt tussen drie verschillende rechtsfiguren: een privaatrechtelijke overeenkomst, een *contrat administratif*, en een *acte unilatérale*. In de jurisprudentie zijn de *régie intéressée*, de *affermage* en de *concession de service public* aangemerkt als *contrats administratifs* (Dankers-Hagenaars 2000: 193).

De *régie intéressée* en de *affermage* vertonen sterke overeenkomsten met het concessiebegrip dat in de Nederlandse literatuur gangbaar is. Hier zal dieper worden ingegaan op de *concession de service public*, aangezien dit een constructie is waarbij de investeringen in de infrastructuur voor rekening en verantwoordelijkheid

van de concessiehouder (kunnen) komen. Een ander type concessie is de *concession de travaux publics* waarbij het gaat om het realiseren van een publiek goed. De overeenkomst waarbij een onderneming de dienst mag uitvoeren na eerst zelf de infrastructuur, een publiek goed, te hebben aangelegd is een *concession de service public et des travaux publics* (Nijhof 2000: 195). In dit geval is de looptijd van de concessie een stuk langer teneinde de concessiehouder in staat te stellen om uit de opbrengsten van de dienst de aanleg van het netwerk te kunnen financieren.

Het feit dat de *concession de service public* een *contrat administratif* bepaalt onder meer dat de Franse bestuursrechter bevoegd is om over een geschil te beslissen. Verder bepaalt dit gegeven een aantal van de rechten en plichten van de partijen bij de overeenkomst.

De *concession de service public* heeft een aantal belangrijke kenmerken. Om te beginnen gaat het om een overeenkomst tussen een overheidsorgaan en een privaatrechtelijke rechtspersoon met een vaste looptijd. Daarnaast is het doel van de concessie het beheer of de exploitatie van een *service public* en haalt de concessionaris zijn vergoeding voor de geleverde prestatie in hoofdzaak uit datgene wat de gebruiker ervoor betaalt. Verder is de rechtsverhouding deels een overeenkomst, deels een eenzijdige handeling van het bestuursorgaan (Dankers-Hagenaars 2000: 221). Als gezegd is het object van de concessie een *service public* oftewel: '*une activité d'intérêt général gérée par une personne publique ou sous son contrôle, selon un régime exorbitant du droit commun*' (Nijhof 2000: 197).

De rechten en plichten die voor concessieverlener en concessiehouder gelden in het Franse stelsel zijn in ieder geval de volgende. Voor beide partijen vloeit uit de concessie een plicht tot nakoming voort. De concessiehouder heeft financiële rechten op basis van bijdragen van de consumenten en eventueel van de concessieverlener (zoals subsidies etc.). Daarnaast heeft de concessiehouder recht op financieel evenwicht tussen het algemeen belang en het ondernemingsbelang. Dit houdt in dat compensatie door de concessieverlener dient plaats te vinden bij onvoorziene omstandigheden, wanneer als gevolg daarvan aan de concessiehouder meer plichten worden opgelegd. Dit betekent overigens niet dat de ondernemer geen normaal ondernemingsrisico draagt, het gaat om bijzondere omstandigheden. Tot slot heeft de concessiehouder rechten die voortvloeien uit de *service public*. Het gaat hierbij om de eigendom en overdracht van bepaalde goederen. Bepaalde goederen vallen automatisch en zonder compensatie terug aan de concessieverlener, de *biens de retour*. De goederen die facultatief en tegen betaling kunnen worden overgedragen aan de concessieverlener zijn de *biens de reprise*. Ook voortvloeiend uit de *service public* is het recht op exclusiviteit; de toekenning van een monopoliepositie voor een bepaalde duur. Het bestuursorgaan heeft ook een wijzigingsbevoegdheid in het algemeen belang (Dankers-Hagenaars 2000: hoofdstuk. 5).

### **Drink- en afvalwatersector in Frankrijk**

Sinds 1790 zijn de gemeenten in Frankrijk grotendeels verantwoordelijk voor het leveren van drinkwater en het wegvoeren van afvalwater. Het is een *service public*, oftewel een publieke taak, waar in het Franse stelsel specifieke voorwaarden voor gelden (zie paragraaf 11.2.3.1). Zoals hiervoor bleek hebben de gemeenten de bevoegdheid om deze publieke taak zelf uit te voeren, in een publiekrechtelijke rechtspersoon onder te brengen of uit te besteden aan een private partij. In de praktijk blijkt meer dan tachtig procent van de Franse consumenten drinkwater te krijgen van private drinkwaterondernemingen (Elnaboulsi: 514). Verschillende onderzoeken hebben aangetoond dat de uitbesteding van drinkwater en afvalwaterdiensten aan de private sector leidt tot stabiel management, grotere efficiency en andere positieve effecten (Cour des Comptes 1997; Cowan 1997; Lynk 1993).

Als een gemeente ervoor kiest om de taak uit te besteden is er veelal sprake van een contractduur van tussen de zeven en de twintig jaar. Vaak vindt er een aanbestedingsprocedure plaats waarin na concurrentie wordt beslist wie uiteindelijk het contract krijgt.

Het meest populair in de drinkwatersector is het *affermage*-contract dat sterke overeenkomsten vertoont met de Nederlandse concessie, zoals hiervoor al aan de orde kwam. In mindere mate wordt gebruikgemaakt van de *concession de service public*. Juist dit laatste type overeenkomst blijkt te worden ingezet als sprake is van het doen van investeringen door de private partij. Aan het einde van de concessieperiode wordt de infrastructuur die door de private partij is aangelegd weer overgedragen aan de gemeente.

#### **11.2.4 BEÏNVLOEDINGSMOGELIJKHEDEN CONCESSIE**

Zoals hiervoor is besproken heeft de wetgever vrij veel vrijheid ten aanzien van de formele en materiële vormgeving van de concessie. Dit betekent dat ook ten aanzien van de beïnvloedingsmogelijkheden de wetgever vrijheid geniet.

Door te bepalen wat de inhoud van de concessie zal moeten zijn, kan de wetgever, al dan niet door dit mede over te laten aan de concessieverlener, bepaalde doelen stellen die de concessiehouder zal moeten halen. Dit kan algemeen worden gehouden, maar ook waar nodig gedetailleerd zijn. Ook kunnen bepalingen worden opgenomen ten aanzien van de tariefstelling door de concessiehouder die hij zal hanteren om zijn investeringen terug te verdienen. Bovendien is het mogelijk om in voorkomende gevallen een subsidie te verlenen ten behoeve van het doen van investeringen. Het instrument van de concessie biedt derhalve veel flexibiliteit.

Een belangrijk voordeel van de concessie is dat het bestuursorgaan het object van de concessie bepaalt. Het primaire doel van de concessiehouder, het nakomen van de concessie is daarmee gelijk aan het realiseren van het publieke belang. Daarop zal de concessiehouder ook worden afgerekend. Door de aanbesteding vindt de

economische overweging van de onderneming plaats op het moment dat men meedingt naar de concessie. Het feit dat het bestuursorgaan de inhoud van de concessie bepaalt, kan echter ook een valkuil zijn. Er moet immers gepaste afstand zijn van de zijde van de overheid, maar tegelijkertijd wel een bevoegdheid om in te grijpen als het echt moet. Daartussen moet een goede balans worden gevonden. Een gevaar van een concessiestelsel is dat de concessieverlener de concessie ‘dicht-timmert’. De wetgever zal dit bezwaar mogelijk kunnen ondervangen door aan te geven welke onderwerpen wel en niet in de concessie worden opgenomen. Er moet bovendien rekening worden gehouden met de aantrekkelijkheid voor de onderneming om mee te dingen naar een concessie, wil optimaal kunnen worden geprofiteerd van de concurrentie in het aanbestedingsproces.

Naar analogie met het Franse recht inzake de concessie verdient het naar mijn mening aanbeveling om de concessieverlener een eenzijdige wijzigingsbevoegdheid in het algemeen belang te geven, zodat de overheid in onvoorziene gevallen toch de mogelijkheid heeft om de private onderneming die een publieke taak uitoefent, waar nodig aan banden te leggen. Deze bevoegdheid moet wel aan heldere voorwaarden en normen worden gebonden, zodat het voor de concessiehouder duidelijk is wanneer kan worden ingegrepen en op welke financiële compensatie gerekend kan worden. Voor deze financiële compensatie kan aansluiting gezocht worden bij het Franse beginsel van recht op financieel evenwicht. Bij de voorwaarden waaronder zou mogen worden ingegrepen, kan worden gedacht aan toerekenbare niet-nakoming door de concessiehouder en noodgevallen.

In een concessie wordt doorgaans afgesproken dat de nieuw aan te leggen infrastructuur eigendom wordt van de private onderneming die deze aanlegt en vervolgens zal exploiteren.<sup>2</sup> Na ommekomst van de concessieperiode is van belang dat deze eigendom weer terugkomt bij de overheid. Er moet daarom in de concessie rekening gehouden worden met het bepalen van een redelijke prijs, het ook tegen het einde van de concessieperiode kunnen afdwingen van goed onderhoud en het behoud van expertise inzake het beheer van de infrastructuur bij de concessieverlener.

## 11.3 OVERHEIDSAANDEELHOUDERSCHAP

### 11.3.1 INLEIDING

De gedachte zou kunnen postvatten dat vitale infrastructuur in handen van de overheid zou moeten blijven vanwege de publieke belangen die een rol spelen. De overheid houdt dan de eindverantwoordelijkheid voor onder meer investeringsbeslissingen. Men zou kunnen denken dat honderd procent overheidsaandeelhouderschap aan deze wens tegemoetkomt. Aan het eind van deze paragraaf zal de vraag worden beantwoord of dit instrument daarvoor werkelijk geschikt is. Overheidsaandeelhouderschap is een instrument waarmee de overheid probeert publieke belangen te realiseren. In verschillende infrastructuur-gebonden secto-

ren zijn ondernemingen actief waarin aandelen worden gehouden door de staat of door regionale overheden. Aandeelhoudersbevoegdheden zijn privaatrechtelijke bevoegdheden.

Als de overheid van oordeel is dat zij een publiek belang zelf moet behartigen, is de wetgever van mening dat publiekrechtelijke vormgeving principieel de voorkeur verdient. Dit uitgangspunt is vastgelegd in een aantal wettelijke bepalingen, zoals artikel 160, tweede lid, Gemeentewet en artikel 158 tweede lid Provinciewet. De achtergrond van deze bepalingen is dat een publiekrechtelijke vormgeving uiteindelijk met meer waarborgen en transparantie is omgeven dan wanneer de overheid zich in privaatrechtelijke jas hult (Schlössels & Zijlstra (te verschijnen in 2008): hoofdstuk 7: paragraaf 2.4).

Dit principiële uitgangspunt brengt met zich dat er een goede motivering ten grondslag moet liggen aan het gebruik door de overheid zelf van privaatrechtelijke instrumenten om publieke doelen te bereiken. Er is overigens geen afzonderlijke wettelijke grondslag vereist voor het gebruik van privaatrechtelijke bevoegdheden door de overheid. Dit heeft ermee te maken dat het legaliteitsbeginsel alleen een wettelijke grondslag voor overheidsoptreden vereist als er sprake is van het eenzijdig opleggen van verplichtingen (Van Ommeren 1996: 202). Bij het uitoefenen van privaatrechtelijke bevoegdheden is daarvan in de regel geen sprake.

Er moet derhalve een goede reden zijn om gebruik te maken van privaatrechtelijke bevoegdheden door de overheid. Hierbij is een belangrijke rol weggelegd voor de vraag of met de gebruikelijke publiekrechtelijke middelen zoals regelgeving en toezicht de publieke belangen in kwestie niet goed kunnen worden geborgd en met aandeelhouderschap wel.

De lijn van het overheidsbeleid wat betreft aandeelhouderschap van de staat oftewel het 'deelnemingenbeleid' is de afgelopen jaren geweest dat publieke en zakelijke belangen zoveel mogelijk gescheiden moeten blijven. Daarom was het, alsmede vanwege financieel-economische motieven, in beginsel de bedoeling om waar mogelijk te privatiseren. Daarbij werd als argument aangevoerd dat aandeelhoudersbevoegdheden te beperkt zijn om effectief op publieke belangen te sturen. Die zouden dan ook beter door middel van wet- en regelgeving kunnen en worden gehandhaafd (Tweede Kamer, 2001-2002, 28165, nr. 1).

Dit beleid geldt overigens niet rechtstreeks voor deelnemingen van gemeenten en provincies. Met inachtneming van de formeel-wettelijke beperkingen zijn gemeenten en provincies vrij om zelf hun deelnemingenbeleid te bepalen. Een voorbeeld van een formeel-wettelijke beperking is het verbod van privatisering van energiebedrijven. Aandeelhouders van de netbeheerders mogen hun aandelen uitsluitend verkopen na instemming van de minister van Economische Zaken. De minister onthoudt zijn instemming als er sprake is van privatisering (artikel 93, tweede en derde lid Elektriciteitswet).

Hieronder wordt kort het juridische systeem van overheidsaandeelhouderschap geschetst. Daarna wordt meer in het bijzonder ingegaan op de mogelijkheden die dit instrument biedt voor de overheid om te sturen op publieke belangen.

### 11.3.2 BESCHRIJVING AANDEELHOUDERSBEVOEGDHEDEN

Er wordt wel gezegd dat de algemene vergadering van aandeelhouders (AVA) de ‘hoogste macht’ in de vennootschap is. Deze uitspraak heeft een kern van waarheid, maar ook kritiek is op zijn plaats. Er is namelijk een verschil tussen de juridische bevoegdheden van de AVA en de mate waarin zij deze in de praktijk werkelijk effectief kan maken (Van Schilfgaarde: 187).

De vennootschappen waarvan de overheid aandeelhouder is, kennen vaak vanwege hun omvang op grond van boek 2 Burgerlijk Wetboek (BW) een (verplicht) structuurregime. Een vennootschap is een structuurvennootschap, in wettelijke termen: ‘grote’ vennootschap als aan drie voorwaarden is voldaan (art. 2:153 lid 2 BW). Ten eerste moet het geplaatste kapitaal samen met de reserves volgens de balans met toelichting € 16 miljoen bedragen. Ten tweede moet de vennootschap krachtens wettelijke verplichting een ondernemingsraad hebben ingesteld. Tot slot moeten minstens honderd werknemers werkzaam zijn bij de vennootschap in Nederland. Nadat een vennootschap aan deze voorwaarden voldoet, is zij verplicht daarvan opgaf te doen bij het handelsregister. Nadat deze opgaf drie jaren aaneengesloten is ingeschreven, wordt de vennootschap van rechtswege een structuurvennootschap.

Het gevolg van de toepasselijkheid van het structuurregime voor de AVA is dat zij op een afstand van het bestuur wordt geplaatst, doordat zij andere bevoegdheden heeft dan in de gewone vennootschap. Deze structuurregeling is betrekkelijk recent (per 1 oktober 2004) gewijzigd om nu juist de aandeelhouders meer zeggenschap te geven dan voorheen. De belangrijkste controle van het bestuur vindt in een structuurvennootschap plaats door een raad van commissarissen (RvC). Zo benoemt en ontslaat deze het bestuur en stelt hij het salaris van de bestuursleden vast. Bij de ‘gewone’ vennootschap worden de bestuurders benoemd en ontslagen door de AVA. Voor een structuurvennootschap waarvan alle aandelen in handen zijn van publiekrechtelijke rechtspersonen (overheden), geldt een wat afwijkende bevoegdheidsverdeling, ook wel genoemd het ‘verzwakte regime’. In dit geval geldt dat het bestuur wordt benoemd door de AVA in plaats van door de RvC (art. 2:155a lid 1 sub b BW). Het verschil met een gewone vennootschap bestaat er dan uit dat er een RvC is met eigen bevoegdheden.

De AVA heeft voorts op grond van de wet de volgende bevoegdheden. Om te beginnen stelt de AVA de jaarrekening vast. Zij benoemt de commissarissen op bindende voordracht van de RvC, waarbij ze bovendien de bezoldiging van de RvC vaststelt. Verder kan de AVA (bij volstreekte meerderheid van stemmen) de gehele RvC naar huis sturen als zij daarin het vertrouwen opzegt. Voor individuele commissarissen geldt dat steeds de tussenkomst van de ondernemingskamer

is vereist. De AVA kan (bij volstreekte meerderheid van stemmen en ten minste eenderde van het geplaatste kapitaal vertegenwoordigend) de voordracht van de RVC die door de vorige RVC wordt gedaan, afwijzen. Ook voorbehouden aan de AVA is een statutenwijziging. De AVA kan door middel van een statutenwijziging nog andere bevoegdheden naar zich toe trekken, zoals de bevoegdheid het bestuur richtlijnen te geven betreffende het algemene beleid (2:129 vierde lid BW). Bovendien kunnen er in statuten nog een aantal andere bevoegdheden worden opgenomen, zoals bijvoorbeeld de bevoegdheid de tarieven vast te stellen. Ook beslist de AVA over de winstbestemming. Verder heeft de AVA een aantal ingrijpende en belangrijke bevoegdheden, zoals het besluiten tot ontbinding, omzetting, fusie, splitsing en kapitaalvermindering.

Hieronder wordt de mate van invloed van de overheid in de AVA gespecificeerd naar de mate van aandeelhouderschap.

De bevoegdheden van de aandeelhouders kunnen onder omstandigheden van het wettelijke regime afwijken. Dit kan in de statuten en dus door de AVA worden bepaald. Op deze manier zou de AVA bevoegdheden naar zich toe kunnen trekken. Zo worden in sommige drinkwaterbedrijven de tarieven door de AVA vastgesteld. Deze bevoegdheden kunnen evenwel niet zo ver gaan dat het bestuur in het algemeen concrete instructies van de AVA zou moeten opvolgen.

### 11.3.3 BEÏNVLOEDINGSMOGELIJKHEDEN VAN DE OVERHEIDSAANDEELHOUDER

Zelfs als de overheid of meerdere overheden enig aandeelhouder zijn, zijn de beïnvloedingsmogelijkheden van de overheidsaandeelhouder in een (structuur)-vennootschap beperkt (De Ru, Solinge en Bleeker 2007: 44-46). Uiteindelijk kan de AVA zeer belangrijke en ingrijpende beslissingen nemen, zoals het overgaan

**Figuur 11.1**

100%	Overheid heeft volledige controle t.a.v. alle besluiten die de AVA neemt (welke dat zijn, staat hierboven beschreven). Versnipperd aandeelhouderschap (verdeeld over veel verschillende overheden die aandeelhouders zijn) kan hieraan afbreuk doen.
95%	Het verzwakte regime geldt niet meer (dus RVC benoemt bestuur en AVA benoemt de RVC op bindende voordracht van de RVC). Overheid heeft nog steeds volledige controle t.a.v. alle besluiten die de AVA neemt en kan minderheidsaandeelhouders uitkopen.
90%	Idem als 95% behalve: overheid kan niet langer minderheidsaandeelhouders uitkopen.
50+ %	Overheid kan nog net een meerderheid forceren binnen de AVA.
50% of minder	Overheid kan geen besluiten meer afdwingen

(Zie uitgebreider: De Ru, Solinge en Bleeker 2007: 34-36)

tot splitsing, fusie en kapitaalvermindering. De overheid kan, als zij honderd procent van de aandelen bezit, bestuurders benoemen en ontslaan en heeft volledige invloed op alle te nemen besluiten in de AVA. Hoe kleiner het percentage van de aandelen, hoe minder bevoegdheden de AVA heeft. Deze bevoegdheden zijn uiteindelijk echter 'botte' middelen als het gaat om beïnvloeding van het reilen en zeilen van de onderneming om daarmee publieke belangen te borgen. Ze zijn zeer ingrijpend en daarom zal er niet vaak gebruik van worden gemaakt. De AVA beschikt niet over fijne bevoegdheden waarmee ze rechtstreeks invloed kan uitoefenen op de bedrijfsvoering en de keuzes die het bestuur maakt. Hierbij kan bijvoorbeeld worden gedacht aan het bepalen van de tarieven die bij consumenten in rekening worden gebracht en het nemen van beslissingen over onderhoud aan en investeringen in de infrastructuur.

De AVA heeft geen bevoegdheden waarmee zij rechtstreeks invloed kan uitoefenen op het beleid en het dagelijkse reilen en zeilen van de onderneming. In het *Forumbankarrest* (NJ 1959: 43) maakte de Hoge Raad bovendien uit dat het bestuur van een vennootschap zijn taken en bevoegdheden op grond van de wet en de statuten zelfstandig uitoefent. Aan het bestuur kunnen dientengevolge geen concrete instructies worden gegeven door andere vennootschappelijke organen, ook niet door de AVA. Het recht van de AVA om het bestuur te benoemen betekent derhalve niet dat zij de door haar benoemde bestuurders later kan beïnvloeden. De overheid kan, vanwege het karakter van het privaatrecht dat alleen handhaving *ex post* mogelijk maakt, als aandeelhouder beslissingen van het bestuur uitsluitend achteraf aanvechten, waarbij beslissingen van bestuurders moeilijk zijn terug te draaien.

Een ander bezwaar van het borgen van publieke belangen door middel van overheidsaandeelhouderschap dat wel wordt aangevoerd, is dat het behalen van een zo groot mogelijke winst voor de aandeelhouders als belangrijk doel van een kapitaalvennootschap kan worden aangemerkt. Inherent voor een vennootschap is dus de prikkel om zoveel mogelijk winst te maken. In de statuten kunnen ook andere doelen, bijvoorbeeld publieke belangen, worden opgenomen, maar deze zullen onder omstandigheden botsen met het doel van het behalen van zoveel mogelijk winst. Dit is problematisch, omdat het kan leiden tot minder efficiënt functioneren van het bedrijf dat botsende doelstellingen moet nastreven.

In een aantal infrastructuur-gebonden sectoren waar overheidsaandeelhouderschap een rol speelt is het aandeelhouderschap sterk versnipperd. Zo is in de waterleidingsector en in de energiesector en ook bij Schiphol sprake van verschillende aandeel houdende overheden. Dit versnipperde aandeelhouderschap kan leiden tot een afname van de invloed van de overheid en het niet goed kunnen uitoefenen van de aandeelhoudersbevoegdheden (Boot 2007: 24).

### 11.3.4 BEÏNVLOEDINGSMOGELIJKHEDEN OP DE OVERHEIDSAANDEELHOUDER

Een vraag die rijst is of de Rijksoverheid invloed kan uitoefenen op decentrale overheden die aandelen houden in bedrijven in infrastructuur-gebonden sectoren. Zo zijn bijvoorbeeld de energiebedrijven en de drinkwaterbedrijven in handen van lagere overheden. Zoals bleek in de aangehaalde casus aan het begin van deze bijdrage (paragraaf 11.1), heeft de minister geen bevoegdheden om invloed uit te oefenen op de wijze waarop lagere overheden gebruikmaken van hun aandelhoudersbevoegdheden. Bij het behalen van overwinst is het de AVA die beslist wat de winstbestemming zal zijn. Zo is het bij drinkwaterbedrijven herhaaldelijk het geval geweest dat in bepaalde regio's de aandeel houdende overheden winst kregen uitgekeerd, terwijl er ook had kunnen worden besloten om de winst op een andere wijze te bestemmen.<sup>3</sup> Een uiterst redmiddel dat de staat zou kunnen benutten om in te grijpen in aandelhoudersbevoegdheden is het schorsen of vernietigen van een beslissing van een gemeente- of provinciebestuur. Van deze bevoegdheid wordt echter zeer zelden gebruikgemaakt. Eind 2006 heeft zich dit voorgedaan, toen toenmalig minister Zalm van Financiën de beslissing van het gemeentebestuur van Amsterdam om tegen een statutenwijziging die de privatisering van Schiphol mogelijk zou maken, te stemmen, vernietigde (*Stb.* 2006, 615).

### 11.3.5 SLOTSOM

Samenvattend blijkt dat de beïnvloedingsmogelijkheden door middel van overheidsaandelhouderschap, hoewel de AVA de hoogste macht in de vennootschap is, op de keper beschouwd nogal tegenvallen. Ook de invloed van de rijksoverheid op lagere overheden die aandelen houden in bedrijven die zeer belangrijke diensten, zoals drinkwater en energie, leveren, is gering als het gaat om het borgen van publieke belangen. Op het eerste gezicht zou men verwachten dat bij honderd procent overheidsaandelhouderschap de invloed van diezelfde overheid erg groot is. De overheid is immers zelf actor. Maar vanwege de gedaanteverwisseling van de overheid van publiek naar privaat blijkt dit niet het geval. Een aanpassing van het BW op dit punt verdient geen aanbeveling vanwege het streven naar eenheid en consistentie van het rechtssysteem en de beginselen die daaraan ten grondslag liggen. Zo is bijvoorbeeld het aanpassen van de handhavingsmogelijkheden voor de overheidsaandehouder, zodat deze ook *ex ante* zou kunnen handhaven door instructies aan het bestuur te kunnen geven uit dit oogpunt onwenselijk.

## 11.4 BEVINDINGEN

Er zijn in het voorafgaande twee instrumenten geanalyseerd: een concessiestelsel en overheidsaandelhouderschap. Centraal in de analyse stond de mogelijkheid investeringen en daarmee het publieke belang van leveringszekerheid en continuïteit van de voorziening in infrastructuur-gebonden sectoren te borgen.

De eerder opgeworpen vraag was: is het voor de overheid zinvol om bij de regulering van infrastructuur gebruik te maken van een concessiestelsel dan wel publiek aandeelhouderschap, mede in het licht van de borging van het publieke belang van het doen van investeringen?

De verschillen tussen beide instrumenten bleken groot. Ten eerste is overheidsaandeelhouderschap een privaatrechtelijk instrument waarbij de overheid zelf actor is. Dit wringt met de principiële voorkeur voor publiekrechtelijke instrumenten wanneer de overheid zelf handelt. Er moet een goede motivering ten grondslag liggen aan het gebruik van een privaatrechtelijk instrument boven het gebruik van publiekrechtelijke middelen. De beïnvloedingsmogelijkheden van de overheidsaandeelhouder bleken echter beperkt te zijn. Overheidsaandeelhouderschap kan wel aangewezen zijn wanneer publieke belangen niet goed door middel van publiekrechtelijke middelen geborgd zouden kunnen worden.

Verder bleek de concessie een flexibel instrument, omdat de invulling ervan en daarmee de eisen die worden gesteld aan en de afspraken die worden gemaakt met de concessiehouder niet op voorhand vastliggen. Het aandeelhouderschap bleek een minder flexibel instrument. Hoewel de statuten kunnen worden gewijzigd om de AVA meer bevoegdheden te geven, kan dit nooit zover gaan dat de AVA concrete instructies aan het bestuur kan geven. Bovendien is het vanuit een oogpunt van consistentie niet wenselijk dat aandeelhoudersbevoegdheden voor de overheid zodanig worden opgerekt dat er van de oorspronkelijke bedoeling van de wetgever, de scheiding tussen kapitaalverschaffers en het daadwerkelijke bestuur, niets meer terechtkomt.

Hoewel de overheid eigenaar is, en dit lijkt te impliceren dat zij veel macht heeft, zijn er grote beperkingen aan de bevoegdheden van overheidsaandeelhouders, zoals hiervoor bleek. Deze beperkingen zijn groter wanneer sprake is van versnipperd aandeelhouderschap van veel verschillende overheden, zoals het geval is bij de regionale elektriciteitsnetbeheerders. Dit maakt het overheidsaandeelhouderschap uiteindelijk tot een vrij 'bot' middel. Er zijn mogelijkheden om in te grijpen, maar zij zijn onvoldoende toegesneden op de specifieke situatie en zij maken het niet mogelijk om te sturen op publieke belangen.

Bij concessieverlening heeft de overheid aanzienlijke vrijheid om de inhoud van de concessie te bepalen. Bovendien is het aan te bevelen om een tussentijdse wijzigingsbevoegdheid voor de overheid te introduceren die streng genormeerd is; de overheid moet niet te makkelijk kunnen ingrijpen, maar slechts in zeer uitzonderlijke omstandigheden. Daarnaast kan de wetgever binnen het publiekrechtelijke systeem een evenwichtige beïnvloeding door de overheid op de concessie en de concessiehouder vormgeven. Als het plegen van investeringen door private partijen in de infrastructuur wenselijk wordt geacht, is het goed denkbaar dat er bij die partijen huiver bestaat voor ruime bevoegdheden van de overheid om in te grijpen. Het gaat om zeer grote investeringen en een relatief lange termijn waarvoor een verplichting wordt aangegaan. Dit kan een nadeel

zijn van de concessie. Het is daarom wenselijk dat de wetgever een speelveld creëert waarvan de grenzen door de overheid worden vormgegeven, maar waarin ingrijpen door de overheid daarna slechts beperkt mogelijk is (bijvoorbeeld slechts in noodsituaties of zeer uitzonderlijke gevallen).

Een voordeel van een concessiestelsel is dat een concessie periodiek openbaar aanbesteed kan worden. Als gevolg van de concurrentie om de concessie kan en zal dit doorgaans een efficiëntievoordeel met zich brengen.

Een belangrijk principiële punt is daarnaast dat de consistentie van het rechtssysteem moet worden nagestreefd. Daarom is onwenselijk dat de wetgever om tegemoet te komen aan de investeringsmogelijkheden het BW op allerlei punten zou aanpassen voor overheidsaandeelhouderschap of het concessiestelsel op een wijze zou aanpassen die zich niet goed verhoudt met het systeem en de beginselen die daaraan ten grondslag liggen. In het privaatrechtelijke systeem is handhaving *ex post* de norm. In een publiekrechtelijk systeem is er meer ruimte voor eventuele handhaving vooraf, indien nodig.

Een concessiestelsel leent zich voor het doen van investeringen door private partijen. In het geval van overheidsaandeelhouderschap 'doet' de overheid deze investeringen in wezen zelf en zo wordt geen gebruikgemaakt van de investeringskracht van private partijen. Een bestuursorgaan kan een concessie verlenen aan een private partij die investeert in de infrastructuur. Voor deze investeringen wordt hij door de gebruikers gecompenseerd. Zoals hiervoor aan de orde kwam, heeft de wetgever vrijheid bij het bepalen van de randvoorwaarden van de concessie. Van belang hierbij is dat de wetgever terughoudend moet zijn met het creëren van bevoegdheden voor de concessieverlener om in te grijpen. Wenselijk lijkt het om de bevoegdheden om in te grijpen te beperken tot noodsituaties.

Hieronder in figuur 11.2 worden deze overeenkomsten en verschillen tussen een concessiestelsel en overheidsaandeelhouderschap schematisch op een rij gezet.

Op grond van het voorgaande kan worden geconcludeerd dat vanuit het juridisch-instrumentele perspectief dat hier is gekozen, van het concessiestelsel, ondanks de valkuilen die dit met zich meebrengt, op de meeste punten meer te verwachten valt dan van overheidsaandeelhouderschap. Een probleem dat zou kunnen ontstaan bij een concessiestelsel is het verlies van expertise bij de overheid. Dit speelt niet bij overheidsaandeelhouderschap.

Als men van mening is dat bepaalde vitale infrastructuur vanwege het belang ervan in handen van de overheid moet blijven, voegt overheidsaandeelhouderschap weinig toe, nu blijkt dat de beïnvloedingsmogelijkheden beperkt zijn. Wel is er veel voor te zeggen dat vitale infrastructuur waarbij de geleverde dienst een primaire levensbehoefte is, zoals bij drinkwater, onder volledige overheidscontrole moet blijven staan. In dat geval kan volledige uitvoering door de overheid

Figuur 11.2

Kenmerken	Concessiestelsel	100% overheids-aandeelhouderschap
<i>flexibiliteit</i>	de invulling van de concessie is vrij	aandeelhouderschap is wettelijk genormeerd, daarvan moet niet teveel worden afgeweken
<i>invloed overheid op publieke belangen</i>	afhankelijk van de inhoud van de concessie	concrete instructies kunnen niet worden gegeven
<i>rechtskarakter</i>	publiekrechtelijk	privaatrechtelijk
<i>expertise</i>	private partij kan hieraan toevoegen: risico verlies expertise bij overheid	expertise blijft in principe bij de overheid, want bedrijf is overheids-eigendom
<i>concurrentie</i>	kan aanbesteed worden	geen in infrastructuur-gebonden sectoren (want veelal regionaal gebonden aan infra)
<i>handhaving</i>	eventueel is een tussentijdse wijziging mogelijk	slechts achteraf
<i>investeringen</i>	door private partijen	door de overheid zelf als aandeelhouder

zelf in de vorm van bijvoorbeeld een zelfstandig bestuursorgaan (ZBO) een beter alternatief zijn.

## NOTEN

- 1 Mr. K. Wilkeshuis is promovenda en docent bij de afdeling Staats- en bestuursrecht aan de Vrije Universiteit Amsterdam. Zij werkt aan een promotieonderzoek over het waarborgen van publieke belangen op gereguleerde markten, waarin de energie-, openbaarvervoer-, kabel- en drinkwatersector worden besproken. Zij dankt prof.mr. F.J. van Ommeren voor zijn waardevolle commentaar op een eerdere versie van dit essay.
- 2 Dit moet worden afgesproken, omdat vanwege het privaatrechtelijke leerstuk van de natrekking infrastructuur eigendom wordt van de eigenaar van de grond waar infrastructuur zich in bevindt, tenzij een wettelijke regeling anders bepaalt.
- 3 'Klant betaalt winst op kraanwater', *de Volkskrant*, 10 oktober 2006, p. 7 en 'Klant betaalt winst van waterbedrijf; Consumentenbond wil onafhankelijk toezicht op tarief voor drinkwater', *de Volkskrant*, 12 september 2007, p. 7.

## LITERATUUR

- Asser en Hartkamp (2005) *Verbindenissenrecht deel II. Algemene leer der overeenkomsten*, twaalfde druk, Deventer: Kluwer: 4.
- Bovenberg, A.L. en C.L. Teulings (2000) 'De economie van privatisering', *Economisch Statistische Berichten*, 14 april: 304-308.
- Cour des Comptes (1997) *La gestion des services publics locaux d'eau et d'assainissement*, Parijs: Les Editions du Journal Officiel.
- Boot, A.W.A. (2007) 'Overheid als aandeelhouder: een economisch perspectief', in D. Blokland et al. in Kenniscentrum voor Ordeningsvraagstukken; ministerie van Economische Zaken; *Publieke belangen en aandeelhouderschap: essays over de borging van publieke belangen door publiek aandeelhouderschap*, Den Haag: Ministerie van Economische Zaken.
- Cowan, S. (1997) *Getting the private sector involved in water: what to do in the poorest of countries*, The World Bank Group, Private Sector Development, no. 102.
- Dankers-Hagenaars, D.L.M.T. (2000) *Op het spoor van de concessie*, dissertatie Universiteit van Amsterdam, Den Haag: Boom Juridische Uitgevers.
- Elnaboulsi, J. (2001) 'Organization, management and delegation in the french water industry', *Annals of Public and Cooperative Economics* 4: 507-547.
- Huet, F. en S. Saussier (2003) 'Contractual Arrangements and the Provision of Public Interest Services: A Transaction Cost Analysis', *European Business Organization Law Review* 4: 403-428.
- Huygen, A.E.H. (2000) 'Wat is privatiseren?', *Economisch Statistische Berichten*, 22 juni: D-10.
- Lynk, E. L. (1993) 'Privatisation, joint production and the comparative efficiencies of private and public ownership: the UK water industry case', *Fiscal Studies*, 2: 98-116.
- Nijhof, M.B. (2000) *De concessie in Europeesrechtelijk perspectief*, dissertatie Universiteit Utrecht, Deventer: Kluwer.
- Ommeren, F.J. van (1987) 'Het rechtskarakter van de concessie', *Ars Aequi* 5: 334-342.
- Ommeren, F.J. van (1996) *De verplichting verankerd*, dissertatie Vrije Universiteit, Deventer: W.E.J. Tjeenk Willink.
- Ommeren, F.J. van (2005) 'XIV. Overheid en burgerlijk recht', in N.S.J. Koeman (red.) *Praktijkboek Bestuursrecht*, Deventer: Kluwer.
- Ru, H.J. de, G. van Solinge en J.J.N. Bleeker (2007) 'De behartiging van publieke belangen door aandeelhouderschap. Meer beperkingen dan mogelijkheden', in D. Blokland et al. in Kenniscentrum voor Ordeningsvraagstukken; ministerie van Economische Zaken; *Publieke belangen en aandeelhouderschap: essays over de borging van publieke belangen door publiek aandeelhouderschap*, Den Haag: Ministerie van Economische Zaken.
- Schilfgaarde, P. van (2006) (bewerkt door J. Winter) *Van de BV en de NV*, 14<sup>de</sup> druk, Deventer: Kluwer.
- Smith, A. (1776) *The Wealth of nations*, New York: Alfred A. Knopf, herdruk 1991.
- Teulings, C.L., A.L. Bovenberg en H.P. van Dalen (2003) *De calculus van het publiek belang*, Den Haag: Kenniscentrum voor marktordeningsvraagstukken.

- Vermeulen, B.P. (2003) 'De publieke taak: een veel-zijdig begrip' in *De publieke taak*, Publikaties van de Staatsrechtkring Staatsrechtconferenties nr. 7, Deventer: Kluwer: 13-30.
- Schlössels, R.J.N. en S.E. Zijlstra (te verschijnen in 2008) *Bestuursrecht in de sociale rechtsstaat*, 6<sup>de</sup> druk, Deventer: Kluwer.

### **Kamerstukken**

- Nota Publieke belangen en marktordening *Tweede kamer* 1999-2000, 27 018, nr. 1.
- Tweede kamer* 2001-2002, 28 165, nr. 1. Nota Deelnemingenbeleid
- Kamerdebat over marktwerking in de publieke sector d.d. 30 mei 2007. *Handelingen Tweede kamer* 2006-2007, nr. 74: 3929-3954.
- Tweede kamer* 2006-2007, 30 212, nr. 57, 3.

### **Rapporten**

- Wetenschappelijke Raad voor het Regeringsbeleid (2000) *Het borgen van publiek belang*, Reeks Rapporten aan de Regering nr. 56, Den Haag, Sdu Uitgevers:.
- Euromarket (Onderzoekscentrum Europese Commissie) (2005) *Water Liberalisation Scenarios, Work package 9, Analysis of the Institutional, Legal and Organisational Implications of the Scenarios*, Euromarket.
- Euromarket (Onderzoekscentrum Europese Commissie) (2005) *Water Liberalisation Scenarios, Work package 4, Analysis of the Legislation and Emerging Regulation at the EU Country Level*, Euromarket.
- Kenniscentrum voor Ordeningsvraagstukken (2006), Ministerie van Economische Zaken, Publieke belangen en aandeelhouderschap.

### **Jurisprudentie**

- HR 21 januari 1955, *NJ* 1959, 43 (Forumbankarrest).

### **Websites**

- NMa: [www.nmanet.nl](http://www.nmanet.nl) d.d. 2 mei 2007 'NMa: Strengere tariefregulering energietransport gewenst'.
- Ministerie van Financiën: [www.minfin.nl/pps](http://www.minfin.nl/pps), 'Succespraktijk in de polder. Wij gaan voor lange termijn tevredenheid'.
- Website Delfluent B.V.: [www.delfluent.nl](http://www.delfluent.nl).
- Website van het Hoogheemraadschap Delfland: [www.hhdelfland.nl](http://www.hhdelfland.nl).

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## *New Perspectives on Investment in Infrastructures*

Over the last two decades most infrastructures were subject to significant regime change. Once a state monopoly, infrastructures have now been liberalised or even fully privatised, thereby introducing new actors and new levels of decision making. Regime change has led to an increased emphasis on service delivery, lower prices and enhanced consumer choice, together with a greater concern for efficiency. What are the effects of regime change and the resultant short-term focus for the long-term investment in physical infrastructures?

The essays in this bundle analyse the effects on long-term investment in different infrastructures and from different perspectives and disciplines. These findings form the basis for the accompanying WRR Report entitled *Infrastructures: Time to invest*, in which strategic policy orientations are developed that serve short-term values such as efficiency and service provision, as well as long-term values such as security of supply, innovation and sustainability.



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