TORSTEN SEIDEL

Inefficiencies of Quasi-Market Solutions from an Institutional Perspective

A Qualitative Case Study Comparison of Local Public Transportation in Six Cities in Germany and Finland

ACADEMIC DISSERTATION
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UNIVERSITY OF TAMPERE

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Abstract

Economic thinking is increasingly dominating our society due to the focus on financial aspects of everyday life. Regarding public service provision, budget constraints are a permanent topic of discussion among practitioners and decision makers. Monetary questions relate to efficiency and so it is a natural step to look into efficiency aspects on the service delivery. The debate about alternatives in public service delivery is often filled with prejudices instead of verifiable facts.

During the last decades, reforms of the New Public Management type have been implemented the field. In an attempt to combine the advantages of private entrepreneurial thinking and public responsibility, a new form of market organisation has been created, the so-called quasi-market. In an ideal world, this is supposed solve efficiency problems and bring more value for money.

This is where this study steps in. Using economic theory, it points at possible systemic inefficiencies of public service organisation. The quasi-market consists of a contract between purchaser and provider and leaves options open regarding ownership and the degree of competition. Whereas the contract is a compulsory part of the arrangement, the city can decide about the ownership and the competition aspect of providing the service. These options provide the frame for the comparison and are categorised as public monopoly, private monopoly and competitive tendering.

Public services vary on the points of personal contact, measurability and quality management. One simplification in this study is the restriction to Local Public (Bus) Transportation, because its provision has little personal contact, the quality and quantity can be assessed fairly easily and the definition of the service does not provide a challenge. Hence, the data should be less obscure and results are easier to compile than in other services.

With the help of case studies, this research offers validation to the theoretical approach. For each alternative in ownership and market organisation, one case has been selected according to typicality, clarity of structure and availability of data. In order to figure out the influence of the national context, cities from two countries have been selected: Germany and Finland. Chosen cases were Frankfurt, Helsinki, Wuppertal, Tampere, Pforzheim and Jyväskylä. Data was collected from publications and predominantly with the help of semi-structured stakeholder interviews. For the

data, a story about each case was created explaining the historical development and the context of the current state.

The theoretical approach to the study is New Institutional Economics, because it is a broad concept which allows for analysis for realities in their whole complexity. Here it is used to help understanding the efficiency problems of each actor as well as the whole system. Actors are identified as purchaser, provider, workers, and a passive passenger group. Their inefficiency is investigated in the frame of bounded rationality, while systemic inefficiencies are researched from the perspective of transaction costs.

As the first step in each case, the most relevant efficiency problems are identified and classified from the perspective of New Institutional Economics. The contract between purchaser and provider is investigated for inefficiencies prior to the agreement, during the operation and post contract. Apart from bounded rationality and transaction costs, property rights, public choice and path dependencies as the central aspects of NIE are used in the case analyses. In the next step, the cases are compared with their "twins" in the other country. The result of common aspects is an overview of structural weaknesses of each organisation mode. After that, the three organisational modes are compared with each other regarding inefficiencies.

Results show how the choice of ownership and market organisation influences the efficiency of actors and the system as a whole. Unsurprisingly, each organisation mode has its weaknesses and this study is not meant to quantify the differences. Instead, it raises awareness of what is happening when one mode is being applied. The most relevant aspects influencing efficiency are, according to this study: Information asymmetry of operation, struggle for survival, information asymmetry and bounded rationality of the contract, incentives, transaction costs for system upkeep, collusion potential and trajectory actor problems.

Typical results from this study indicate that any kind of change has affected the workers in a negative way overall. Information asymmetry is a large problem when the contractors have different owners. Public operators suffer from the burden of being used for special purposes and tighter restrictions, but enjoy the economic aid by the city. Apart from that, public units are behaving increasingly similarly to private companies after reforms have taken place. Finally, there are significant differences in transaction costs depending on market organisation, with competitive tendering having potentially the highest maintenance.

1 Introduction

1.1 Framing the Research Area

In recent decades, local governments worldwide have become increasingly reliant on new organisation models to provide their citizens with services. Public-sector reforms have played a central role in administrative development (Pollitt, 1993; Hood, 1995). Within the European context, Great Britain took the leading position in trying out alternative concepts (Barr et al., 1990), and it was not long before the European Union (EU) adopted many of its ideas. Competitive structures were introduced into what used to be public monopolies (Boyne, 1998; Pollitt & Bouckaert, 2000). These changes coincided with the so-called "New Public Management," an attempt to make public services more efficient through managed markets (Hood, 2000). In this context, Germany was late and rather hesitant due to the role of path dependencies (Reichard, 2003). The concept of New Public Management has been applied to nearly all types of services that are or have been organised by public administration, such as health care, education, and transportation (Bartlett et al., 1994, 1998; Walsh, 1995).

Reforms have been largely efficiency driven since public expenditures on services are increasingly restrictive. Despite the intent to reduce costs, the quality of services should not be affected; therefore, the provision of services needs to be more efficient (cf. Domberger & Jensen, 1997). A widespread assumption in economic thinking is as follows: The closer the framework is arranged to market structures, the more efficient the result will be. According to this logic, former public monopolies are outsourced and opened to competitive bidding (Nelson, 2003). Throughout the last three decades, a large variety of experiences has been gathered. Much research has dealt with the development of cost efficiency in international literature (Kulmala et al., 2006). For example, Hilke's meta-study from 1992 revealed significant differences in the cost-efficient outcome of market-oriented reforms, depending on the sector that was investigated.

Changes have influenced the structure of the public sector as a whole. In the past, services were integrated into the structure of public administration (Rees, 1976); currently, provision units are separate, and they work independently. Between

the provider and the public authority (purchaser), there is usually a contract defining the demand for a service as well as the quality and the compensation for its provision (Walsh et al., 1997; Almqvist, 2001). Another change has been the introduction of private companies into the field that provide services to make a profit (Parker & Saal, 2003). Finally, a substantial development has been the introduction of competition to replace the traditionally monopolistic structure. These new provision types resemble market structures to some extent and are therefore summarized under the term "quasi-market" (Le Grand & Bartlett, 1993). The basic idea of the quasi-market is to combine the advantages of public authorities to compensate for market failure with mechanisms that protect against government failure (ibid.). Ideally, the result improves efficiency (Kulmala et al., 2006). Boardman and Vining (1992) raised the question about the significance of both competition and ownership in a public company. They concluded that a combination of both produced particularly efficient results. It was soon discovered that the quasi-market and the reforms' general success did depend on the organisational mode. For example, Kähkönen (2004) showed that there are several ways to organise the quasi-market, depending on ownership and competition, making it apparent that results differ depending on which organisation mode is chosen within the quasi-market.

Local transportation is one public service obligation provided by municipalities along with education, health care, etc. All these services compete for allocation of public funds and hence are the focus of political discussion. With quasi-market reforms, politicians are left to decide which organisation forms to choose. Arguments based on perceived efficiency are often used in political debates but usually without being systematically backed up. Consequently, a systematic efficiency based investigation of this subject is necessary.

However, each sector of the various public services have different specific characteristics, regarding complexity, clear definition and quality control (cf. Almqvist, 2001). Local public transportation is normally regarded as a service within a city or agglomeration and includes buses, trams, and local railroads. Within the sector, usually rail-bound and road-bound services are treated separately mainly because of the immense infrastructure costs of rail-bound transportation and inflexibility. Again, for the sake of simplicity, bus transportation is the better choice because it allows the organisational structures and the implication of choices to be investigated more easily.

The results also depend on the nature of the service, such as the possibility to objectively measure the service quality and give a clear definition of the service. Therefore, it is possible to categorize various public services according to their

suitability for competition and outsourcing (Hilke, 1992). In this context, public transportation is regarded as the service having the fewest obstacles; since it is clearly defined, human impact is limited and results can be observed rather easily (ibid.). A prime example is bus transportation, with its higher flexibility due to the lower infrastructure investment costs compared to rail services. For the sake of "simplicity," this study concentrated on one sector: Local Public Bus Transportation (LPT). The difficulties caused by quasi-market reforms are the subject at hand.

1.2 Previous studies in the area

This chapter situates the research in LPT literature and points out a lack of connection in the findings. Naturally, the number of studies has been large throughout the decades and so has been the variety of approaches to the topic. Still, this chapter attempts to make a systematic categorization. This categorization is dichotomous and multidimensional to give justice to the many perspectives presented by the researchers. Obviously, it is easier to prove that something has been done than to prove that something has not been done.

Basically, there are several types of studies: descriptive case studies, comparative, quantitative case studies focusing on monetary aspects, and meta studies. Meta studies by nature are rather general and lack in-depth analysis, providing no detailed reasoning for their findings. On the other hand, detailed case studies omit the larger picture, as they limit themselves to only one particular aspect. This approach creates a gap in reasoning between the results of large-scale quantitative research like Hilke's (1992) meta study and the small-scale understanding provided by detailed case studies (see below). Closing this gap of understanding is one target of this research.

Numerous studies have attempted to compare the costs of different provision regimes. White (1990) offers an interesting approach for a cost-benefit analysis. Farsi et al. (2006) used alternative stochastic frontier models to measure cost efficiency. Margari et al. (2007) employed a mixed method with a data envelopment analysis. Rosenberg and Räsänen's (2005) study provides a non-econometric comparative overview of Finnish cities. A vast majority suggests that quasi-market operators are significantly cheaper and thereby more efficient. Hilke (1992) cites nine studies conducted between 1976 and 1986; each of them shows results favouring private operators. Savings seem to be dramatic, especially in the beginning, but they diminish over time. During recent years, however, there have also been practical-oriented

studies, which are critical about shifting responsibilities from the public to the private sector and introduce market mechanisms because of systematic failure in economic research (Nelson, 2003). Haatainen (2003) points out significant disadvantages for personnel in the quasi-market. Beyond that, the initial market success is questionable—as Boitani and Cambini (2006) found in Italy—or it seems to diminish over time. Gomez-Lobo (2007) reported that collusion very often occurs after the players have established themselves, in order to secure the providers' equilibrium, which is different from the social-welfare optimum. Collusion and merging tendencies undermine the spirit of competition. It has also been noted that sometimes the drop in prices is accompanied with a drop in service quality (Knabe & Sörensen, 2006). As a result, patronage as an indicator for overall attractiveness for the user drops in many cases of public transportation. A lower ticket income may result in the subsequent future downgrading of the service (Mohring, 1972). Generally, experiences soon showed that changing public services to market-oriented regimes was not without problems and that the reduced cost per unit often came at a cost in other segments (Nelson, 2003). Heseltine and Silcock (1990) went into more detail and attempted to explain the causalities between lower costs and the actual reason for the improved technical efficiency.

On a large scale, literature in LPT generally lacks reference to the development of general Public Administration and, in turn, public-administration studies generally ignore the transportation sector. One noteworthy exception is Swarts and Warner's (2014) descriptive case study on Berlin. Still, no other studies that have systematically applied theories regarding efficiency from public administration perspective to LPT exist. For example Almqvist (2001) mentions about efficiency but addresses quality alone without connecting it to efficiency. Recently, some scholars have approached this topic. Beck's study in 2012 about the development in Germany uses—albeit unsystematically—organisational theories in a descriptive way for its cases. Some work by Van de Velde (1999) and Van de Velde et al. (2008a) categorises experiences from the Netherlands into abstract levels and gives them a systematic organisational stakeholder approach, which could be further used for building an inductive theory (Van de Velde, 1999, 2006; Van de Velde et al., 2005, 2008a, 2008b). Ideally, this dissertation may contribute to his series of studies since it uses a similar idea to his stakeholder approach. However, it expands his approach by taking his existing theory and connecting it to practice with the help of the institutional economic theory (see Chapter 2.2).

There have been studies with limited in-depth analysis (for example, Hilke's meta study, 1992), descriptive case studies (Järviluoma, 2004), quantitative regression

analysis (Alexandersson et al., 1998; Henscher & Wallis, 2005; Beck, 2012; Veenemann, 2010), or a concentration on certain details of organisational changes within the cases (Nordstrand, 2005; Jansson & Pyddoke, 2010 for Stockholm; Haatainen, 2003; Valkama & Flinkkilä, 2003 for Helsinki; and Gomez-Lobo, 2007 for Santiago de Chile). An early theoretical approach was used by Evans in 1987, who then tried to make a connection between theory and cases in his 1991 article based on an evaluation of certain indicators of service quantity.

In Finland, the discussion is more quantitative and focuses on Helsinki. Valkama and Anttiroiko (2006) analysed Helsinki as a case of new public management reforms. Valkama and Flinkkilä (2003) described the economic difficulties of operators in the Helsinki region, as did Valkama and Kankanpää (2008). Haatainen (2003) and Haatainen and Sihvonen (2006) focused on the situation of the drivers in Helsinki and how the change of competitive tendering had an impact on them, as did Harisalo et al. (2003). Of the few studies outside the capital region, Rosenberg and Räsänen (2005) made a comparative quantitative study for mid-sized cities. Aarrevaara (2000) provided an account of impacts from competition in LPT; Järviluoma (2004) compiled a 10-year overview of the Helsinki case when the city started competitive tendering, as did Sinisalo with an update (2007). Finally, the previous purchaser unit of the Helsinki region YTV (2001a, 2001b) produced several publications on its development after 1994.

The discussion in Germany is significantly centred on legal issues, as numerous publications show. Barth's 2000 analysis of the legal situation is worth mentioning to understand where the German way to organise LPT originated. Werner's analysis is based on the change in German law that forced a regional integration (Werner, 1998). Kahl (2005) researched the regulatory framework on its way to competition. Kokemoor (2000) examined the legal situation of the employees when the operators engage in competition. Numerous smaller publications (Wittig, 2010; Wüerttemberger, 2010; Wachinger, 2007; Saxinger & Niemann, 2010) mostly appearing in the German journal, der Nahverkehr, have dealt with legal development.

Of the studies not centred on legal aspects, Beck's (2006, 2009; Beck & Wanner, 2008; Beck & Walter, 2010) detailed the economic aspects related to German public transport. Brandt (2006) and Beck (2010) explained the regulatory framework, and Beck (2012) in particular offers a detailed account on the subject. Parak and Unfried (2001) collected legal material and discussed a normative development from it. Finally, Ewers and Ilgmann (1999) strongly promoted competition for LPT in

Germany. Rehn and Valussi (2006) analysed the first steps of its occurrence, which Beck (2012) providing further development.

To summarize this literature review, a number of publications on regulatory frameworks dominate descriptive case studies on the administrative side both qualitatively and quantitatively without a theoretical connection. On the other hand, economic literature in connection with transportation is restricted to an econometric angle, lacking application potential (cf. Porter, 1995). What is missing, however, is an approach where economic theory is combined with case studies.

1.3 Forming the research question, structure for the study, and methodological overview

This study deals with efficiency problems in organising LPT, depending on the organisation's form, and asks the research question, "How does the quasi-market 'solution' in LPT create new inefficiencies?" The introduction in this chapter gives a brief overview of the administrative context of LPT being a public service, the character of public service reforms, the rationale behind the changes, and the relevance of this particular topic. After the introduction in this chapter, Chapter 2 sets the theoretical basis for understanding efficiency in an institutional context that is useful for this study. Chapter 3 explains the methodology of a qualitative, comparative case-study approach. Chapter 4 gives background information on legal matters at the European and national level before getting to the local-case introduction. Chapter 5 presents the cases and a comparison, followed by the conclusive discussion in Chapter 6.

Now that the topic is specified, it is necessary to set the frame for how the matter is to be studied. Finding the methodology has been an iterative process so that the research question, the methodology, and the study object have influenced one another. Beginning with the observation of changes in the organisation of LPT and leading to various forms, the question of how to investigate the phenomenon was influenced by quasi-market literature (cf. Walsh, 1995; Walsh et al., 1997; Le Grand 1991; Le Grand and Bartlett, 1993; Bartlett et al., 1994, 1998), which relies on behavioural economics, suggesting a different behaviour of actors depending on the organisational frame. More specifically, new institutional economics identifies ownership and market organisation as key variables called "institutions" (Williamson,

1985; North, 1990). From that perspective, categories were established (cf. Kähkönen, 2004), and it became clear that each of the categories should be investigated for a complete understanding. Consequently, the research question was extended to the following: "How does the quasi-market solution in LPT create new inefficiencies from the perspective of New Institutional Economics?"

A good understanding regarding the various organisational approaches can be gained from qualitative case-study research (Ragin & Becker, 1992; Eriksson & Kovalainen, 2008). The case studies were conducted under the premise of finding efficiency problems with the knowledge that according to the Greenwald-Stiglitz theorem, no system can suit everyone perfectly at the same time (Greenwald and Stiglitz, 1986). A comparative approach (cf. Ragin, 1987) promises good results along with an understanding of how the organisational framework influences the behaviour and thus the efficiency of actors. As a tool for investigation, two theoretical concepts have been chosen: bounded rationality (Simon, 1957) for explaining the behaviour of actors, and transaction cost theory (Williamson, 1975) to detail the aspects of systemic (in-)efficiency.

1.4 Relevance of the study

This study unites regulatory, administrative, and economic components and is therefore relevant for all these academic circles. Additionally, its implications will be of interest also for practitioners, decision makers, and public administration and management in the two countries. Furthermore, it provides the frame for analysing the situations in other countries and other public sectors. Finally, it has an impact at the EU level because their politicians interfere with LPT on a normative level.

The study has a wide implication regarding actors as well as research. The reason for this is the attempt to embed the LPT service sector into its wider context in society. The results benefit practitioners, public managers, administration, and politicians in Germany, Finland, and internationally. On the academic front, economics and administrative sciences join together to create some new knowledge imported from the LPT sector.

The debate on outsourcing and marketization has a very broad impact on society and raises the question of what can and what should public authorities provide as opposed what are the rights of a private business (cf. Walsh, 1995). The market for transportation comprises altogether 10.9 billion passengers per year. Of these, 98%

travel less than 50 kilometres and fall under the category "local." In 2008, 101.2 billion passenger kilometres were provided, and fare revenues summed up to 10.9 billion Euros. About half of the local transportation was provided by bus in 2008. At the same time, approximately 50% of all short distance travel was done by bus, resulting in 38 billion passenger kilometres. These figures illustrate the significance of LPT in general.

2. Theoretical framework

2.1 Basic concepts of efficiency

According to Leibenstein, “At the core of economics is the concept of efficiency” (1966, p. 392). In a study about efficiency, it is of utmost importance to define the term "efficiency." There are a number of efficiency concepts in economics, of which the basic framework taken here is the maximisation of welfare (cf. Samuelson, 1947). The approach can be determined as the total cost versus the benefits of a service delivery for the whole society as an aggregate of all expenditures used in the service-provision procedure. More efficiency is achieved either when the service is better or when fewer resources are used. Therefore, improved quality and lower production costs are exchangeable in the sense of efficiency. The most efficient delivery would be the one needing the least input (cf. Sullivan & Sheffrin, 2003).

In fact, there are two central concepts in this study. The first, quasi-market, is defined in Chapter 2.3 as an intermediate form between an unregulated market and a publicly administrated provision of goods (LeGrand & Bartlett, 1993), while the second concept “efficiency” proves to be tough. Efficiency is the goal of service production; therefore, efficiency optimization is in question. One way to produce is supposed to be more efficient than another, so a comparison needs to be done. The perspective is welfarist; the service is provided for the sake of all people (cf. Samuelson, 1947).

Efficiency is one core concept in economics, yet there is not one universally valid definition but instead a series of concepts, as shown in this chapter. Thus, there is no such thing as “absolute” efficiency but a combination of specific, limited approaches. These approaches for measuring efficiency contribute from different angles to the overall efficiency question. For this reason, these varying approaches can support the definition of efficiency; however, none of these approaches alone make the definition. Only the use of all definitions together defines the efficiency concept. The efficiency concept therefore still suffers from being under-defined.

The so-called x-efficiency by Leibenstein (1966) focuses on how effectively some input produces a given output. If a company makes the best use of its workforce, machinery and technology will be producing the maximum; therefore, the company is regarded as being x-efficient. Being x-inefficient does not mean automatically running out of business; for example, in a monopoly situation, a lack of competition may help inefficient production techniques survive.

Apart from this, scientists have identified numerous reasons why and how the organisational context makes markets depart in behaviour from the neoclassic economic theory assumption (North, 1990; Le Grand, 1991; Walsh, 1995). High work pressure, a dissatisfactory work environment and low salary, and incorrect or a complete lack of responsibilities are some factors that negatively influence motivation and therefore internal x-efficiency (Syvänen, 2003; Stiglitz, 1987).

To improve x-efficiency, there are typically transaction costs involved regarding work supervision and surveillance. The same is true of companies that have to be controlled by their output. X-inefficiency exclusively examines the relation of produced outputs by a set of inputs and ignores whether the inputs are ideal or whether the outputs are superior. This consideration is referred to as allocative efficiency for society overall (Leibenstein, 1966).

The next kind of efficiency is productive efficiency. Productive efficiency involves the ratio of input vs. output—the so-called "crude efficiency" (Le Grand & Bartlett, 1993, p. 14)—with a sole focus on the monetary perspective. The output concept can be extended by taking service quality into account. In order to assess these variables, a mixed qualitative/quantitative approach is needed. This approach resembles value for money and helps to explain the social utility maximum. However, it would be too short sighted to stop here; the causes for higher or lower production efficiency of a unit should be investigated to determine whether there have been changes that have not been covered by calculating the productive efficiency. The explanatory approach within an organisation is the so-called "x-efficiency" (see above). It examines why some individuals have a higher productivity than others and what factors influence individual performance (Le Grand & Bartlett, 1993).

It is important to ensure that the quality of a service is comparable to different service approaches in the quasi-market. For that reason, the quality level should be the same, and the public authorities have to take care that this condition is fulfilled.

If one wants to understand the whole picture, it is necessary to evaluate if there are any "losers" in the game, how they are affected, and to what extent it is possible to eliminate or justify their disadvantage. This approach finally leads to the concept of Pareto efficiency and is a central element of welfare economics.

Pareto efficiency

Pareto efficiency deals with the utility of individuals in a society. It is assumed that the system is efficient or optimal and that individuals are active in order to increase their utility position without causing someone else to lose something. In this way, it is easy to implement changes that are Pareto efficient, since everybody is in favour of personal welfare gains. On the downside, Pareto efficiency is very restrictive and makes the model static, since many changes leave at least one individual worse off. This test is of foremost importance for individuals.

As a next step, one can try to improve the overall welfare by allowing solutions that include transfers between individuals (and mind the transaction costs). The winner could compensate the individual who is losing welfare; when there is still an efficiency gain for both, the scenario follows the premises of Pareto. Alternatively, one could ask how much the potential loser is willing to offer to the potential winner in order to convince him not to make any changes. This compensation extension to Pareto is called Kaldor-Hicks efficiency, with Kaldor compensation reflecting the gainer's point of view and Hicks compensation the loser's perspective (Kaldor, 1939; Hicks, 1939).

It is important to note that Pareto efficiency and its extensions are only necessary but not sufficient criteria to achieve welfare maximum. For this reason, Pareto efficiency needs to be taken into account only when it is violated. Pareto does not make any conclusions regarding efficiency once the criterion is violated.

The first welfare theorem claims that under certain idealized conditions, a system of free markets will lead to a Pareto-efficient outcome (Arrow & Debreu, 1954). However, the restrictive assumptions cause the result not to optimize welfare in real-life economies. These assumptions include existing markets for all possible goods, full equilibrium, perfect competition and the absence of both transaction costs, and externalities (Walsh, 1995). For the violation of these requirements, markets are not believed to have a general advantage over other service organisation models concerning welfare optimization and the Pareto-efficient outcome (Bator, 1958).

Typically, it is believed that fixing all conditions is not possible, so for this reason, the theory of the "second best" has emerged. It concludes that it is impossible to judge the efficiency of alternatives to the optimal solutions and that there is no such thing as sub-optimal (Broadway & Bruce, 1984). However, the Kaldor-Hicks expansion allows for one to discern if a change improves the overall situation. As a precondition, it needs to be possible to quantify the change for each individual and the amount needed for compensation.

Finally, it should be noted that North (1986, p. 236) writes about Pareto efficiency as being rather senseless. While it is true that Pareto efficiency is virtually impossible to achieve, neglecting this particular aspect of efficiency would be ignorant. In fact, ignoring the welfare of a certain group of individuals can lead to very dissatisfying results. Consequently, it would mean a failure to acknowledge that economics is meant for the welfare of all people (cf. Stiglitz, 2001).

Distributive efficiency describes the individual value of one good for each consumer. Public Transportation has a rather marginal utility for a notorious car user, while it is invaluable for someone who has no other alternative. This efficiency category provides a "raison d'être" for public transportation for those depending on it because this group's utility is very high. In reducing marginal utility, while a basic bus transportation service is very much needed, there is a limit to how much LPT is useful. The decision of how much service is appropriate is made by the administration based upon case subsidies involved and also upon the recommendations of politicians (for a disaggregated approach on market initiative, see Weiss, 2006. Those decisions are made on behalf of the citizens and potential users, where public choice (see chapter 2.2) comes into play.

Finally, the concept of allocative efficiency is relevant. One aspect of the concept of allocative efficiency deals with the idea that the right mix of services is being produced. The service of providing public transportation is competing for resources with other goods. In the sense of real policy, it is important to consider that subsidies are paid from a limited stock and that public transportation competes with other services for the support. Allocative efficiency, in this sense, means that the marginal utility gain for all subsidised services is identical. When one sets output as a constant, less money needs to be spent in an efficient surrounding on LPT and can therefore be spent to improve other services besides LPT. Allocative efficiency thus describes optimal resource investment. When allocative inefficiency takes place in the context of providing services, there are a number of influencing factors that could make an unregulated market-economy fail, such as public goods, economics of scale, externalities, merit goods, and information asymmetry (Walsh, 1995).

The idea of market failure is also based on the thinking of allocative efficiency, when the amount of service provided and consumed is not optimal. The market "does not create appropriate incentives" (Walsh, 1995, p. 11) for producers and consumers. While the idea of public goods and the information asymmetry on the customer's side is not sufficient to justify state intervention, the merit good encourages basic services for special groups and subsidized fares. Externalities suggest that demand can be stimulated by lowering prices and offering more services than consumer preference expresses (ibid.). Economics of scale need to be divided into two sub points: while it is difficult to say if the operator is able to realize scale economics in public transport, the planning should be better centralized. Merging tendencies to support this idea could exist solely in order to decrease competition (Tyson, 1995).

Basically, individuals decide through demand what services are being produced, and the providers meet this demand so that there is an equilibrium. This equilibrium is found through the price that the users are ready to pay for a service. This classic model is better modified when one regards the possibility that LPT serves not only the customer but also the larger community, as it reduces environmental damage, congestion, and the number of accidents and provides strategic mobility for very young, old, and disabled people. All these so-called external effects are not reflected by the customer and his will to pay; therefore, public subsidies are justified, adding to the customer's equilibrium price. External effects play a significant role in LPT and account for nearly half of the expenses in practice.

Allocative efficiency is achieved when the value of external effects can be calculated and transferred in the form of municipal subsidies to the provider. Optimal resource allocation would mean that the marginal utility gain per subsidy would be identical over all public services. However, the calculation of marginal utility gain across all public services is beyond the scope of this study. Allocative efficiency also involves the wise spending of resources for public transportation, so that the highest output can be reached with a given input (productive efficiency). For example, this accounts for planning, which has to ensure that the marginal utility for the subsidies in each service line is identical. This allocative efficiency aspect is mainly connected to the definition of demand and the allocation of resources to it. This concept justifies planning in public transportation (Tyson, 1995; cf. Knieps, 2004).

The most important conclusion is that all definitions do not add up and may exclude one another. In reality, optimising one sort of efficiency often means creating inefficiencies in some other field. This fact is violating the pareto-optimum.

For this reason, total optimization of efficiency or making a decision if one approach is superior to another one is not possible.

2.2 Tools of understanding institutions and actors: New institutional economics (NIE)

New institutional economic theory (cf. North, 1990) provides a perspective on how to understand actors' behaviour and the arrangements framing their position. According to Drobak and Nye (1997), the defining character of new institutional economics (NIE) is a common understanding of—or shared concern about—problems, instead of offering being a consistent school of thought. This common understanding involves a wide array of issues, which scholars refuse to exclude. Schneiberg and Clemens (2006) proclaimed that "a rejection of reductionism lies at the core of institutional theory" (p. 195). One reason for this wide inclusion of aspects could be the holistic approach. Like Samuels (2008) describes, being holistic is one strength of the NIE. It takes into account every relevant aspect of the study object. This study follows these core lines of institutional theory, rejecting reductionalism and embracing a holistic understanding.

While being holistic gets one close to reality, one downside is the lack of clear boundaries. In order to get an orientation in this unclearly defined field, this study relies on the perspectives of authors who are active in researching NIE and their perception of relevant content. This relevant content in the form of efficiency concerns is presented in this chapter 2.2 and was based on a meta-study by Richter (2005), who investigated a number of leading edited publications in the field. For this study, these commonly understood problems shall represent the ideas and content of New Institutional Economics (NIE) and form the basis for the economic analysis, replacing a formal definition of NIE.

Whereas classic institutional economic theory (cf. Veblen, 1899) rejects classic, economic efficiency considerations, the new institutional economics that tries to incorporate institutional ideas into the "mainstream," such as neoclassic economics (cf. Samuels, 2008). Both the strength and weakness of NIE lie in the fact that the concept is manifold and therefore lacks a clear definition. The strength is that the broad concept embraces many different aspects and is able to grasp a wide spectrum of reality. On the downside, such a model is bound to be very complex with many variables, which is difficult to handle. However, the charm of a complex system is

that it can resemble a complex reality closely. A distinct advantage of NIE is that "unlike neoclassical economics, [it] does not assume the institutional framework as given, but make[s] it into the object of research" (Richter, 2005, p. 162). Since the framework has been changed in LPT (see Chapter 1) and since there are several institutional alternatives within the quasi-market (see Chapter 2.3), utilizing NIE promises to give interesting results.

According to Irscher (2010), one central aspect of NIE is to extend the "Homo oeconomicus" concept by bounded rationality (cf. Simon, 1957, see below). Actors do not have full information, and transaction costs emerge when collecting information. North (1990) adds that cost efficiency is not the sole driver and social and cultural values do play a role as well. Norms and culture are informal institutions that are fixed and difficult to change (cf. Hofstede, 2001), whereas laws and contracts are formal institutions (North, 1990).

One important distinction within the NIE theory is the question of whether one regards institutions as self-adjusting and therefore whether transaction-costs would play a role. Richter (2005) identified one group of scholars (such as F. Hayek, R. Nelson, A. Greif, and M. Aoki) who hope to advocate for an "invisible hand to institutional economics." On the other hand, some scientists oppose this idea, like R. Coase, J. Buchanan, and G. Tullock, H. Simon, K. Arrow, O. Williamsson and D. North, perceiving transaction costs as a significant explanatory variable. Williamson (1975) is especially associated with this "visible hand" (Richter 2005, p. 165).

In the case evaluations of this study in Chapter 4, transaction costs (and the fear thereof) turned out to be very useful in explaining outcomes, so the concept was used as a main tool for further analysis. Consequently, the theoretical background of NIE was narrowed down to those sources acknowledging the existence of transaction costs.

The next step in utilizing NIE for this study is an attempt to coalesce the different concepts used by the different scholars. Relying on the editors of collective volumes[1] from the years between 1984 and 1997 that engage in relevant research, Richter (2005, p. 165) identifies nine economic fields altogether as significant. Of these, Transaction Cost Economics, Property Rights, Public Choice, Contracting Theory, and NIE history received more than one vote. Williamson's (1998) view on the matter is largely congruent when he states that "driving forces in the design of institutions are transaction costs, (…), centralized contracting, opportunism and bounded rationality" (Williamson 1998). Consequently, these concepts are

[1] These scholars were as follows: Furubotn and Richter (1984), Langlois (1986), Nabli and Nugent (1989), Harris (1995), Drobak and Nye (1997), Clague (1997)

considered relevant also for this study and used in the further institutional analysis of the case studies. With their help, the study should be holistic enough. It is important to note that the concepts used here are overlapping, and even within the leading group of economists, there is no agreement on the clear boundaries of each concept. For example, when Williamson (1979) speaks of centralized contracting as a separate topic, it still means that bounded rationality, transaction costs and opportunism play a viable role. According to Coase (1964), NIE engages in institutional comparative analysis. Methodologically, this study incorporates Coase's idea of comparative welfare analysis by comparing the selected cases against the optimum situations by identifying weaknesses of each approach. Another aspect is that orthodox welfare analysis often tries to benchmark one outcome against an optimum, which resembles—in this qualitative research—a study of the impact of reforms.

The central approach of NIE is defining actors and institutions. Institutions are the "rule of the game" (North, 1990, 3), a regulatory framework in which actions take place. They includes contractual arrangements between two parties as well as legal aspects (North, 1990, 1991, Williamson 1975, 1985). Applying this concept to LPT, beyond the mere contractual arrangement, institution also indicates the question of market organisation in a monopoly or competition and the question of the operator having public or private "game rules." Actors are individuals or groups of individuals who are engaging in a transaction. In the case of public transportation, first the administration setts the regulatory framework in a particular case. The administration also represents the interest of the tax payer, namely by ensuring efficient use of subsidies and engageing in a service contract with the operator. The administration also observes the fulfilment of the contract and performance of the operator. The second actor, from the management's point of view, is the operator as a company providing the service, which engages in a service contract with the administration and employs workers. Both relations are negotiated. The company attempts to ensure its survival and is profit-oriented, in the case that it is private. The third actor is personnel from a distinct group because their interests may differ from the management's. These employees negotiate working contracts with the operators and are first of all interested in safe jobs, high salaries, and a favourable work environment. They are responsible for personal service. The final actors are the users or customers who represent the demand and partly finance the service; they are interested in sufficient, high-quality service, which relates them to all of the above groups.

Coase (1937) has been credited for introducing transaction costs when he described the costs for using a price mechanism. The term "transaction cost" was first coined in 1960 by the same author (Coase, 1960). The use of the term transaction cost differs as, for example, Demsetz (2003) leaves out the internal costs of an organisation and therefore operates close to Coase's original idea. Cheung (1992) uses a broad definition of the concept based on Williamson (1975, 1981), who speaks of whole-transaction-cost economics and broadens the application of the term beyond the buying and selling process, including every transaction needed to keep the production and exchange system running. He also connects transaction costs to institutions, such as a contract between a purchaser and provider (see also public choice theory, Mueller, 2003). Williamson's (1996) theory incorporates a number of other concepts of behavioural economics, such as bounded rationality. Individuals and actors are not perfectly rational; they are limited in their knowledge, foresight, and intellectual capacity. This assumption puts transaction-cost economics in line with the "bounded rationality" paradigm of Simon (1957). Consequently, behaviour and decisions may be flawed, despite other circumstances being optimal. Selfishness and opportunistic behaviour are part of the concept as well, to the point of exploitation and moral hazard (Williamson, 1998).

From the perspective of transaction-cost economics, a system is efficient if the institutional approach cannot be optimized anymore in terms of transaction costs. However, there is no optimal solution, since each approach has inherent weaknesses. Whereas neoclassic economics regard efficiency as input versus output in connection with profit maximization and cost minimization, the question for transaction-cost economics is how to shape institutional arrangements in a way that transaction costs are low (ibid.).

Marsh (1998) explains that transaction costs include switching costs when the customer decides to change the producer. In turn, switching costs include search costs, start-up costs, education costs, and exit costs. All these costs seem to be relevant in LPT (see Chapter 5.4.2). From the perspective of a new potential operator, switch costs are connected to market-entry barriers and the idea of contestable markets (Baumol et al., 1988). For the city, switch costs emerge when an arrangement is changed, like when an operator is disintegrated from the administrative structure and the need to gain expertise on tendering.

Transaction costs (Williamsson, 1985) provide a basis for in-house service and a critique for which to market approaches, especially in such arrangements as compulsory competitive tendering. Sometimes the transaction needed to build up and run a market is more costly than keeping an in-house arrangement. While neoclassic economics assumes that players are perfectly rational, transaction cost economics denies this assumption and uses a limited rationality concept. The human mind cannot retrieve and process all information perfectly, so a contract will be imperfect. Bounded rationality becomes a problem when the capacity of the human mind reaches its limit due to uncertainty and complexity. In addition, the limited predictability of the future does not allow all eventualities to be covered in a contract, making effective contracting impossible. Williamson assumes that at least some players are self-centred maximisers and opportunists. This becomes increasingly problematic when only few actors are in the market (Marsh, 1998).

Property Rights

In this context, property rights revolve around the assumption that a public company differs from a privately owned one. Alchian (2008) describes the idea of property rights as comprising questions of accessibility and implications; therefore, it is "the exclusive authority to determine how a resource is used" (Alchian, 2008). Applying this to the context of this study, the question switches to how access to personal property differs for a public versus a private company. In fact, public companies have to follow stricter rules when buying services and infrastructure. Furthermore, their owner may use the unit for special purposes. To give an example from this study (Chapter 5), the management of a public transportation unit cannot freely negotiate when buying buses but instead has to follow certain rules for public purchases. He or she may be forced to use more expensive services, such as repair shops, bookkeeping, or rental agreements, due to city mandates. Backup facilities may also need to be on demand. All these restrictions are based on property rights and influence the efficiency of the operator. While it makes no difference for the user as long as the service quality is the same, this study assumes that ownership does have an impact on employees because of different working contracts and rights. Possibly, the relation between the public administration and the operator is also influenced by property rights. Finally, market behaviour supposedly depends on public or private operations, as a public operator cannot go bankrupt.

Public Choice

Public choice theory (cf. Ostrom & Ostrom, 2002; Mueller, 2003) is foremost about expressing and applying public interest. It theorizes how it is possible to achieve a welfare maximum for people who are represented, such that politicians would give orders on behalf of the citizens and set a framework for the administration. Important contributions to the theory have been made, for example, by Stigler (1961) for regulation and government intervention; by Buchanan and Tullock (1962) in terms of rent seeking; and by Niskanen (1971) in the field of bureaucracy. Public choice recognizes that there are groups that follow their own interests, including the city administration, which may lead to government failure. The actors are basically rational but may suffer from ignorance and pursue their own interests that may be different from the welfare optimum. Rent seeking is a major factor for wasting resources and thus causing inefficiency. In the case of administration, Niskanen (1971) describes the problem that bureaucrats tend to oversize their resort in an attempt to maximize power. This behaviour is inefficient from an allocative point of view. Subsequent particular interests may include lobbyists or the presence of corruption and also fall under the category of government failure from a public-choice point of view. Boyne (1998) argues that a politician who wants to be re-elected is unlikely to allow large and obvious inefficiencies in service provision.

In the context of LPT, this means that bureaucrats are responsible for ensuring public transportation is available on behalf of the citizens and customers. It is widely accepted that the city administration takes at least the duty of planning, coordination, and supervision (Tyson, 1995, Gwilliam, 2001, Lehmann, 2001, and Gomez-Lobo 2007; for an alternative view, see Knieps, 1993 or Weiss, 1999). However, the administration does not necessarily organise the service delivery. The relation between administration and the provider is that of a principal and an agent. Both parties engage in a contract (see below). Since actors have interests of their own that might differ from the "public choice," it may seem feasible to introduce a scheme of incentives into the contract which should motivate the provider to behave in a way that benefits the public. Laffont and Tirole (1993), Fabbri (1998), and Laffont and Marimort (2002) have worked on a theory of incentives, many of which are related to contracting.

Contracting Theory

The contract is an essential institution in the quasi-market (Walsh et al., 1997) and is always included and central to new institutional economics. This contract not only defines rights and responsibilities but also reflects the distribution of risks, the level of trust among the actors, and the handling of uncertainty (cf. Simon, 1957). Beyond the difficulty of predicting the future, humans are also only capable of handling limited complexity, leading to bounded rationality (Simon 1957, March 1988). For these reasons, the contract will always be incomplete (cf. Laffont & Martimort, 2002). Within contractual arrangements, the question of improving productive efficiency through incentives comes foremost into play (Fabbri, 1998). The contract is also a tool through regulation to keep the actors from exploiting the situation, especially when a certain minimum standard is introduced. In order to make this regulation effective, there must be an observation system (Walsh et al., 1997).

Contract theories split into two categories, depending which kind of imperfections they emphasize. The first category contains the so-called complete contract theory and focuses on implications on the contract-design caused by the inability of courts to verify facts and outcomes. Limitations and imperfections in this respect occur post-contract on the execution level. On the other hand, incomplete contract theory is concerned pre-contract. It analyses the contract design and efficiency consequences of imperfections, in particular the bounded rationality problem of the difficulties of contractors to predict, identify, and find optimal responses to future events (Masten 1999). This study makes use of aspects of the incomplete contracting theory.

One important difference between the two approaches is that complete contract theory assumes supernatural abilities in actors to process information, anticipate future events and find solutions for it. Incomplete contract theory on the contrary assumes no inhuman rationality in actors and expects that the human rationality is limited also among the contracting parties. Instead, actors with limited or bounded rationality need to balance on one side how much energy can be assigned to take all possible events into account against the expected efficiency gains. This is already a transaction cost consideration. With this given extension, actors are seen as potential sources of making mistakes. This inefficiency may happen before the contract is fixed, during the process, or after the contract is made. The potential to exploit asymmetric information and then deviate from joint maximizing behaviour ex-post

is known under the name moral hazard, while it is called adverse selection where ex ante asymmetric information causes actors with inferior characteristics to engage in transactions (cf. Furubotn & Richter, 2005, Laffont & Martimort, 2002).

Finally, actors might not want the same thing (see public choice theory, Mueller 2003), which may lead to inefficient results needing extra regulations and the settlement of argumentations. Potentially, these considerations fall under transaction costs.

NIE History

A historical approach is meant to explain the institutional framework by looking at what has been there before; it thus helps with understanding why certain structures have been chosen. Institutional history consequently takes into consideration the changes that a decision would bring and the costs for changing. It is thus possible that decision makers who have the same goals will decide differently based on the fact that the prior institutional setting was not the same. This phenomenon is also called path dependency. Possible reasons to explain this outcome is the fear of the unknown or an attempt to minimize the transaction costs involved in changing a system. The historical approach offers an explanation for why and how inefficient structures can survive over a long time (North, 1981, 1990). The issue of transaction costs refers to Williamson and Coase (1964) and the problem of limited foresight in regards to Simon's bounded rationality (see below).

While the NIE history provides understanding as to why choices have been made, it does not analyse what is happening in terms of efficiency other than what has already covered by Transaction cost theory ("costs for changing a system," see above) and bounded rationality ("the fear of transaction costs," see below). The relevance of NIE history for this study is therefore negligible.

Bounded Rationality

The concept that humans have limited rational behaviour forms the basis for Bounded Rationality Theory. Although basic ideas are older, Herbert Simon (1957) is credited with the development of this concept (cf. Gigerenzer and Selten, 2002), which tries to match economic models to real-life situations. According to Simon, classic economic utility theory has too many formal restrictions, which limit the real

value of the findings (2002). He starts with the assumption that information is not freely available. As a result, gathering information is either costly or lacking, just as false information will possibly lead to wrong decisions (see also information asymmetry). The concept of bounded rationality is then extended by the notion that even with perfect information, the results do not lead automatically to a rational choice; instead, there is difficulty in predicting future events, making an impact on the configuration of contracts (see also contracting theory). This chain of events also leads to risk-avoidance behaviour. Furthermore, human limitations for processing information have an impact. Eventually, communication limits also apply; the actors may agree on something, but the interpretation of the agreement may differ, leading to the problem of one party thinking that the other is trying to breach the contract. Bounded rationality is a basic concept. It is influenced by asymmetric information and requires transaction costs to solve it (see also March, 1988).

Laffont and Martimort (2002) fittingly summarized the theory of the firm under asymmetric information by relating to the transaction costs of Williamson (1975) and Leibenstein's x-efficiency (1966). They argue that asymmetric information is the reason why a firm is unable to maximize profit and therefore why the transaction fails to provide social maximum. The result can be "constrained optimal" (Laffont & Martimort, 2002, p. 47) at best and is not x-efficient in the sense of Leibenstein. As Williamson (1975) described, the presence of information asymmetry has a negative impact on allocative efficiency. Arrow (1975), supported by Williamson (1985), explains how vertical integration supports information asymmetry and thus efficiency. In contrast, Laffont and Martimort (2002) emphasize that information asymmetry supports the vertical integration of production versus a split of purchaser and provider or principal and agent but without favouring either public or private entities. Interestingly, they see optimization as a trade-off between efficiency and rent extraction and therefore leave the path of maximum social utility as seen by neoclassic economics. Asymmetric information is a part of the bounded rationality concept, causing transaction costs and the risk for moral hazards and adverse selection (Laffont & Martimort, 2002).

Both the principal and the agent show behaviours of risk aversion. Risk aversion is inefficient when the barrier of taking the risk is higher than the possible gain versus the possible loss. Since "aversion" is a term related to feeling, it opposes rationality and therefore limits the latter. Hence, risk aversion belongs to bounded rationality (Ibid.).

The concept of adverse selection describes the situation where one party, usually the principal, makes a poor, pre-contractual decision because of bounded rationality.

Typically, bounded rationality in this context is related to a lack of information. The purchaser may not know that the chosen provider is prone to bankruptcy or will break the contract by not fulfilling the quality standards. The concept of adverse selection can also be used when the contract design is faulty or leaves loopholes (Ibid.).

Moral hazards are related to the bounded rationality idea and described as the behaviour of choosing actions that harm another agent's performance or utility. As Laffont and Martimort (2002) described, the cause lies in the fact that "the principal and the agent had (not) the same objective function" (ibid, p. 146). The idea is believed to date back to Knight (1921), who connected it to the insurance business. In the principal-agent scenario, the principal loses control over actions of the provider, and the provider may have an incentive to exploit this lack of control. Therefore, performance control is very important. In a wider sense, one party may exploit the arrangement; namely, the provider may fail to produce the quality and quantity of a service on purpose in order to reduce costs. Moral hazard in a wider sense also covers cheating attempts, such as failing to comply with standards like the maximum age of vehicles. Taking this concept further, it also applies to attempts to compromise standards outside the contractual arrangements, like workforce arrangements. For that reason, there is a performance surveillance system in use, and technical devices can help to track down quantitative indicators in LPT. Customer evaluation and personal inspection try to grasp the qualitative aspect of the service, while a GPS system tracks the position of the vehicles and reports delays.

Another post-contractual problem, which technically falls under moral hazard, is the struggle of survival. Fearing business loss, companies might agree to provide services below-cost. Thus, a company that is operating inefficiently is awarded a contract and eventually goes bankrupt. The fact that the operator is selected by the purchaser also places this problem in the category of adverse selection.

Conceptual approach on the different components of NIE

It becomes obvious that many concepts presented above do overlap. Contracting theory in the context of this study largely consists of bounded rationality and transaction costs, which in turn overlap each other. One simple example illustrates the problem: A legal dispute between two parties is caused by a different interpretation about the content in the contract. Transaction-cost economics would

claim that this is an issue within its boundaries because of the extra costs caused by the dispute and hence transaction costs. Bounded rationality, however, would see the problem caused by the limited foresight of the actors and the fact that the agreement can have only a limited number of regulations. Therefore, the problem is caused by bounded rationality. Since the nature of dispute is based on the contractual agreement, the subject is a matter of contractual theory. All approaches are correct from their points of view. This overlap does not constitute a problem, since the focus is on calling out the problem, and the explanatory factor is secondary (to see how this is handled methodologically in this study, compare this section with Chapter 3).

2.3 The Quasi-market narrative

2.3.1 Introduction

This section provides an overview of the quasi-market characteristics. In the past, most of LPT has been provided through administrative in-house production in an integrated, hierarchical form of a service obligation. This currently out-dated model stands against three forms of quasi-markets. The main difference between hierarchical production and the quasi-market is the existence of a contract between the city administration and the company that runs the service. Chapter 2.2 suggests and Chapter 5 confirms that the implications and consequences of the contract are two-sided. Apart from a contract that unites all quasi-market forms, the two other key features are the decision of ownership and the competition. With theoretical knowledge regarding efficiency and new institutional economics, the first working question is RQ1: How is the quasi-market perceived from the institutional perspective?

One criterion in the distinction of quasi-markets is the difference between a monopoly and a competition. In-house production and contacting scenarios are monopolistic approaches, whereas competitive tendering is a non-monopolistic solution. The second main criterion for distinguishing quasi-markets is that of ownership: Generally, private companies are working for profit, while public enterprises do not. In a competition scenario, public and private companies can co-exist. Thus, there are three different forms of quasi-markets: A public monopoly, a private monopoly and a competition that can host both public and private operators (cf. Kähkönen, 2004). Understanding the consequence of these attributes is the first step in this research.

In order to understand the quasi-market, first the administrative hierarchical model is explained and provides an understanding of how services have been organised before the quasi-market was introduced. A hierarchy means that the central control unit has a strong influence on the executive level, whereas the unit manager and the worker have little impact. Direct influence from higher levels can be seen as ambivalent, though political issues can be applied directly, as there is a direct communication channel to exercise political control over the service. Politicians can also have a negative influence, as they are not experts and might pursue their own particular goals that do not serve the public. An administrative hierarchy also violates the principle of subsidiarity. Subsidiarity means delegating

responsibilities to lower levels to improve efficiency because a unit manager more likely understands how to optimize work procedures on the lower level than a central manager.

According to Rees (1976), a hierarchy model indicates that all the work related to a service is done by civil servants and public employees. Civil servants enjoy a high degree of security on the job; a worker cannot lose his job unless he seriously violates regulations. Individual work performance (x-efficiency) is an important factor for the productive efficiency of an organisation. In an administrative unit, there is a rather strict line of command, and the worker has very little influence on working procedures. This lack of influence can cause frustration and individual underperformance with it, as Syvänen (2003) shows. Another problematic may also be that there is too little pressure on the employee, since there is a great deal of job security and little motivation to include incentives to work well. On the other hand, safe jobs with good working contracts generally lead to high work satisfaction and good performance. Work satisfaction also improves with mutual trust among the actors when a successful, long-time work relationship has been established (Ibid.).

Planning enjoys the distinct advantages of vertical integration, which makes work better and more efficient. For example, bus lines and timetables are adjusted to the working times of the bus drivers, thus reducing costs. Since there is only one operator, there is less trouble with coordinating the timetables, and the times can be optimized for the passengers. Thus, "holes" in the schedules are less likely to occur. Planners also enjoy a high extent of strategic flexibility in case they need to make changes, since a detected change in demand can lead to an adjustment in service rather quickly without needing to consider the fulfilment of contracts. Finally, planning can rely on safe figures from the operator, as the operator has no reason to provide wrong data. The planning process does not require buying the data from the operator but instead obtains it automatically and directly as part of the same unit (cf. Tyson, 1995; Nash, 1988; Lehmann, 2001; also see Chapter 5).

One typical criticism towards the administration related to a missing incentive on the management level is a lack of innovativeness, so that the same routines dominate and new alternatives are not tried out. Also, the bureaucracy has often been accused of inefficient working procedures, sometimes called "state failure" and analogous to "market failure." According to Public Choice Theory, it can be dealt with through the market by efficiency pressure (Baumol et al., 1988; McMaster, 1998).

Inflexible structures are features of vertically integrated public operators. In order to respond to unforeseen challenges, authorities establish "slack," otherwise known as redundant structures (March, 1988) as a reserve. This slack is controversial

because it requires paying for the upkeep of components that are largely unproductive most of the time. Inflexible structures boost transaction costs in cases where one would want to react spontaneously to unforeseen challenges, and they can make it entirely impossible to react at all. Therefore, slack is needed as a reserve.

In-house production represents a form of monopoly; no other operator is allowed to enter the scene. Adam Smith's economic theory suggests extensive pricing for monopolists. However, in this case, the monopoly is of public origin, which means any form of profit is returned to the city as income, in this case as a lower deficit. One could see this as a balance so that any income gain through a monopoly would be a reduction in subsidies and therefore simply a transfer from the user to the city (which reduces the transfer of subsidized tickets by the city to the users). Monopoly theory, however, shows that a portion of the higher prices is directed to the workers in the form of better contracts, more favourable work conditions, and a smaller workload per employee. Still, a public monopolist does not maximise profit (in fact, it does not need any profit at all); therefore, exploitation of the monopoly has less purpose. Better working conditions in a public workplace as compared to a private job can be either a political question or a result of monopoly exploitation. Evidence shows that as soon as the public operator is exposed to competition, the working conditions change, which indicates a monopoly influence on this issue (cf. LeGrand & Bartlett, 1993; Milward & Parker, 1983; Walsh, 1995; Walsh et al., 1997).

Managers of public units have little incentive to improve their overall efficiency because the city automatically pays all deficits and a higher deficit does not lead to consequences for the unit. There is always the danger that the service needs more subsidies than predicted, so there is budget uncertainty and therefore low cost control. Regulations and standardized work procedures can prevent form-efficient productivity because of strict and inflexible administrative rules like budget restrictions, rigid acquisition rules, and long chains of command. On the other hand, procedures have been introduced in order to make administrative work more efficient (Laffont & Tirole, 1993; Lamothe & Lamothe, 2006; Milward & Parker, 1983).

When thinking of natural monopolies, both economics of scale and economics of scope can be utilized by one big company compared to numerous small units. A repairing unit can work on all vehicles used in the city administration and reduce marginal costs. Large operators may have a better position when bargaining for new buses, for example. Processes can be optimized within. Additionally, monopolistic services can be customer-friendly due to a corporate identity, which makes the network easier to use and coordinate. There will be only one ticket with the

possibility to change buses and one coordinated timetable. In case of complaints, there is just one organisation responsible, and it is impossible to escape from the responsibility. On the downside, meeting customers' expectations has no bearing on the company's survival. Hence, there is less incentive to produce good-quality services (cf. Evans, 1991).

2.3.2 The term quasi-market from an institutional perspective

According to Le Grand (1993), quasi-markets are markets because they introduce competition to former monopolies, but they are not pure markets. They are "quasi" because they differ on the supply and demand side. A quasi-market is an umbrella term under which a large variety of markets are subsumed. It has in common the fact that there are different actors involved. It also has a responsible entity, usually public, that ensures that services are provided according to need (effectiveness). The service can be provided as effectively by private companies as by public entities. Therefore, on the supply side, there are not necessarily profit maximizers. There is an agreement between the responsible entity and the supplier that defines the amount and character of the service to be supplied. This contract also regulates the terms of the relationship (responsibilities) between the players and compensations. Further, players are the customers represented by the public authority. The customers or users play a more indirect role because they pay only a part of the price directly while another is paid via taxes. For this reason, local public and state institutions also exert their influence via monetary steering. This process can be seen as a power shift from customers towards public institutions. Additionally, higher-level state institutions form a legal framework, which reduces the varieties of possible quasi-market forms (Le Grand & Bartlett, 1993). Finally, workers' interests are involved. It does make a difference to them if they work for a public unit as civil servants or for a private company (Kokemoor, 2000).
In quasi-markets, one attempts to utilize the advantages of markets like efficiency gains, keeping in mind that public services entail particular ethical and social demands or have an impact on the whole of society. Therefore, quasi-markets seek to incorporate the market-like advantages and particular needs and requirements of public services. However, as a hybrid form, they may have very specific problems apart from being a mere compromise between two extremes (Kähkönen, 2007). In the next step, we need to ask what do these problems look like, and from where do

they stem? What are the consequences of these problems? How do these problems endanger the theoretical efficiency gains, and who pays the price?

2.3.3 Elements of the quasi-market

The purchaser-provider split

With the development of a quasi-market, the institutions have to be modified. Formerly integrated in joint structures, purchaser and provider are now separated. The purchaser represents the public and makes decisions on behalf of the customers. For this reason, the purchaser holds a democratic mandate. Usually, power is transferred towards the purchaser. One could see this as a reduction towards the core responsibility of politicians. The provider's responsibility is reduced to merely carrying out the tasks and being compensated for this action. There is no longer any need to keep the company under public control, but it is often privatized. If it is still public, it at least is independently managed and is expected to behave like a private company. Namely, accounting follows private standards and becomes profit-oriented. The idea is to have a chance to compare providers (Mueller, 2003; Siverbo, 2004).

Changes imply transaction costs (Williamson, 1985). When the purchaser and the provider are separated, there will be costs for monitoring the provider and also for communication. The new standard in the relation between the two actors requires a formal contract, the preparation of which is costly, and there also may be additional costs in cases of disagreement, such as litigation (March, 1998). These transaction costs are a threat to efficiency gains, especially in small businesses (Walsh, 1995).

More transaction costs are incurred when the system is changed from an integrated service. There will be some changes in responsibilities, personnel, and likely also space, which incur one-time transaction costs (Coulson, 1997). A result from a test interview revealed in 2007 the impact of responsibilities shifting from the operator to the purchaser. For example, the planning unit may be separated from the provider and transferred to the city administration, even physically, and some tasks may be taken away from the manager. Transaction costs caused by changes in responsibilities emerge, such as when one unit moves to a new office space, and the old space remains unused. As a result of contracting, civil servants may be relocated

to other areas of the city's administration where they are less knowledgeable. Apart from transaction costs, the workers' motivation as an influencing factor of x-efficiency in the new job may be lower because the new job does not suit their abilities so well ([TMP0], code for interview data, see appendix).

The purchaser-provider split also implies that both players may work for different goals. The purchaser is looking for a secure service level at the cheapest possible price, whereas the provider seeks for profit and survival. These potential diverging interests may cause severe problems with especially dire results when it comes to social services (Almqvist & Högberg, 2008). Agreements between the purchaser and the provider can be interpreted in different ways, and not all contingencies are taken into account. Also, the provider is under pressure to be efficient and may want to work around regulations or simply cheat for many reasons.

Removing the provider from the public administration conglomerate makes the costs for the service more transparent and comparable with competitors. Accounting practices are similar to the private market, and all their advantages can be compared to in-house productions.

The contract

The one commonality in quasi-markets is that the service is regulated through a contract. The contract is an agreement between a purchaser and an independently operating provider with a limited duration (for example, up to ten years in public transportation according to EU regulation 1370/2007). The public authority regulates the demand and acts as a purchaser of the services on behalf of the public. This also means that the authority makes the decision on which provider(s) to choose on behalf of the customers (Le Grand & Bartlett, 1993, Walsh et al., 1997).

The relationship between players is influenced by organisational changes. The general idea is that both players negotiate on the basis of trust and control. Interaction between the purchaser and the provider should be on the same level; neither should dominate the other or dictate the relationship. The relation between purchaser and provider is regulated through a contract. In the contract, the operator is given the right and obligation to provide the services. This contract should contain a definition of the type and amount of a service and negotiations between both parties about the service and the price or compensation (LeGrand & Bartlett, 1993).

Through the contract, it is possible to ensure both the quality and quantity of a service. Quality needs to be checkable and measurable (Almqvist, 2001). It is

necessary to clearly define the projected demand for the service, which reduces waste and potentially helps to adjust provision to match demand. The costs defined in the contract mark the maximum of subsidies and thereby improve the cost control of the purchaser. In the agreement, it is possible to include incentives for the provider, such as a premium for punctuality or offering a share of the user payment. With this kind of mechanism, the service quality can therefore be improved. Typically, the performance is observed in order to verify the fulfilment of the contract, thereby ensuring that the customers actually receive the service for which the municipality paid. Although this control is not free, it is agreed that the investment is justified (Walsh 1995, Walsh et al. 1997). However, control by outsiders can be seen as a sign of mistrust (Syvänen, 2003), causing dispute or burdening the relationship between purchaser and provider. Trust, however, is important for successful negotiations, as the evidence shows, while mistrust can cause trouble in future negotiations. Contracting over many periods can build up trust between the players and ensure a successful and efficient relationship (McMaster, 1998).

Contract functions differ within cases. Basically a contract is supposed to bring transparency and accountability, especially in a multi-organisational context. Hanson and Longva (2014) distinguish between public-public, public-private, and network contracting. There are three approaches to contracts: First, it can be control based, which is very detailed and includes incentives and sanctions. It implies that the contracting partners have diverging interests. The purpose of the contract is to allocate risks, responsibilities, and rewards. Another approach is a trust-based arrangement, with a cooperative background. Sanctions are seen as unnecessary. The third category is resource, process, and procedure based. It is applied when it is difficult to control for and measure quality. In a public-public scenario, one could expect a focus on the use of resources rather than delivery control and incentives. They claim that from a network perspective, a new kind of contract is needed that links all actors together. In the German case, this network structure does play a role in the regional associations.

Shapiro (1987) examined the relationship between trust and control through the lenses of public choice and principle-agent theory and pointed out that in a quasi-market with potentially changing actors, trust can be abused. Trust is originally a personal trait and has connotations with faith, confidence, and reliance. Therefore, actors prefer to deal with persons who are known to them with repetitive transactions and an on-going relationship. On the other hand, market mechanisms are faceless, and trust is impersonal. This kind of trust arises when social control measures are in force, such as public reputation. Both principal and agent may fail if

there is no social relation and if it is episodic rather than continuing; principles are inexperienced with legal matters while agents are repeat players. For that matter, in-house production internalizes vulnerable economic transactions and decreases physical and social distance. One more problem is multiple actor downgrading when subcontracting. Referring to Max Weber for a model of transitioning embeddedness to impersonal trust, Shapiro points out the dilemma of selecting trustworthy agents from among unfamiliar candidates (1987). In the end there is also the question of who guards the principal because this person can make mistakes as well. Control and regulation seems to be the solution, but there is a large dilemma; the more we regulate, the more we steal the potential of trust (ibid.).

Contracts are rather fixed, inflexible arrangements, and any flexibility option within a contract can be costly. During the contract period, either side may want to introduce changes, so some degree of flexibility is needed to avoid changes in the contract. However, flexibility means uncertainty in contracts, and private companies will have to be well compensated for such a contract, as the private sector is very hesitant to take over risks. After contracting, there is a two-sided monopoly; both parties are bound to their agreement, and walking away (i.e., market exit) is very difficult during the duration of the contract (Coulson, 1997).

Transaction costs emerge as permanent side effects. The planning unit needs to define the demand in advance and according to certain standards. It takes resources to create and write a contract, transaction costs, which primarily affect both purchaser and provider. Both sides negotiate the content of the contract, the quality, the quantity of services, and the compensation. The parties need to consult a lawyer in order to check the arrangement and ensure everything is clear. After the agreement, it is necessary to determine if the operator is fulfilling the obligation according to the contract. If not, unpleasant negotiations and possible penalties may follow, which burden the relationship in the future. Additional costs may be accrued if the courts have to intervene in case of legal proceedings (March, 1998).

Planning is also affected by the contract, both in negative and positive ways. Inflexibility of the arrangements sets limitations for many years in the future, so major adjustments or a reform of the system will have to wait for this long time; otherwise, one will need to renegotiate with a monopolist who can always insist on the fulfilment of the original agreement. The purchaser needs to rely partly on the operator's expertise regarding the realistic costs of a service and the demand. This information asymmetry can be exploited and result in higher prices or lower performance goals than could be possible, which means a lower productive

efficiency. Finally, the unit works extra when it contributes to the contract by defining the service, but it gains a higher consciousness about the demand (Tyson, 1995).

The operator may find incentives in the contract and give incentives to its own workers in order to improve their efficiency. Since the company is independent, the unit management has more responsibilities and fulfils the subsidiarity postulate. It utilizes an efficiency-based accounting and budgeting method, which discourages systematic waste. Non-bureaucratic structures and the tendency to maximize profits are supposed to encourage innovation and optimise work procedures (Fabbri, 1998).

2.3.4 Decisions and alternatives in the quasi-market

Monopoly

If we compare the different provision models from a theoretical point of view, the classic market theory suggests that more competition will reduce the costs by raising the productive efficiency of the operator. The superiority of the market system lies in the incentive to be efficient; otherwise, other competitors will win the market share and push inefficient operators out of the market (Ewers & Ilgmann, 1999). Thus, the welfare optimum is achieved. This thinking is based on Adam Smith's idea of the "invisible hand." However, this thinking has been questioned because of imperfect conditions, with Joseph Stiglitz (2001) being one of the most outspoken icons.

In the quasi-market, contracting gives one a time-limited monopoly for the agreed services, with the option for regular renewal. Depending on the automatism of the renewal, the arrangement can be regarded as a true monopoly. Whereas a concession with guaranteed renewal (see the Jyväskylä case, Chapter 5.2.2) falls into the monopoly category, competitive tendering (see the Frankfurt or Helsinki case, Chapter 5.3) does not because of controlled periodic competition, despite fixes to the situation for the same period of time.

One basic problem with any monopolistic type of service provision is the so-called monopoly rent or monopoly premium. Hilke (1992) provides a simple approach to this phenomenon. Following his argumentation, monopolies give the operator the chance to earn a higher income than is possible on the market. As a

result, the level of service is lower or the price paid as a subsidy is higher than necessary. Differences in contracting occur for a public provider as compared to a private one regarding the monopoly costs for the purchaser. For private operators, studies have shown a considerable profit surplus from a monopoly. The private operator derives full benefit from the monopoly status, which increases his profit, while the public operator returns the profit to the owner. Thus, for a public operator, it does not make sense to charge for profit. While some argue that the monopoly rent is just a transfer from customers to the provider and increases its profit, others take the position that the monopoly rent is partly redistributed to the workforce in the form of higher salaries and a smaller workload with the result of a lower productive efficiency (cf. below for an argumentation that improved motivation as a result actually increases efficiency). Additionally, it is inefficient since additional public services could have been provided with that public subsidy money. There is an important difference in these two assumptions; in the transfer model, a public monopoly would not be inefficient because the monopoly rent is returned completely to the subsidiser. However, the conclusion that the monopoly rent is at least partly used to improve salary and reduce the workload per person is the result of countless studies and therefore assumed henceforth. Another charge against monopolies is the accusation of hostility towards innovation. There is no pressure to improve internal productive efficiency, especially for a public monopolist, so the service is even more expensive than it could be. However, a private monopolist might want to optimize efficiency to obtain even more profit (Hilke, 1992).

For the operator, a monopolistic contracting scenario bears a number of efficiency advantages. As a comparably big company, it can utilize economics of scale and also economics of scope. The operator could identify incentives in the contract and can give incentives to his or her own workers in order to improve their efficiency. Since the company is independent, the unit management has more responsibilities and fulfils the subsidiarity postulate. It utilizes an efficiency based accounting and budgeting method, which discourages systematic waste. Non-bureaucratic structures and the tendency to maximize profits are supposed to encourage innovation and optimise work procedures (Ibid.).

There is a difference between the monopolies of public and private companies. If the monopoly is of public origin, any form of profit is returned to the city as income—in this case, as a smaller deficit. One could see this as a balance, so that any income gain through a monopoly is a reduction in subsidies and therefore simply a transfer from the user to the city (which reduces the transfer of subsidized tickets or charges by the city to the users). As previously described, a public monopolist does

not maximise profit, so there is less danger of exploiting a monopoly. Monopoly theory shows that some of the higher prices are directed to the workers in the form of better contracts, better work conditions, and a smaller workload per employee. Better working conditions of a public workplace than in a private job can be either a political question or a result of monopoly exploitation. Evidence shows that as soon as the public operator is exposed to competition, the working conditions change, which indicates a monopoly influence on this issue. Politics may either determine the conditions and use of monopolies as a tool or accept the consequences of a monopoly as a matter of fact. For the workers, these positive conditions increase job satisfaction and can also motivate them to work more efficiently (Rees, 1976; Milward & Parker, 1983).

Both public and private entities are reported to direct parts of the monopoly premium to their employees in the form of higher salaries, better working conditions, and contracts. For the workers, these positive conditions increase job satisfaction and possibly motivate them to work more efficiently. It is unclear, however, if the higher job satisfaction and possible improvements in motivation, which increase individual productivity, level out the higher costs. A change in status allows the employer to include incentives in the contracts with the workers and thus improve their individual motivation and efficiency. The employees also have more influence on their own work in an independent company, and working procedures are supposedly more efficient than in an administration. The personnel also enjoy low pressure on the job as a side effect of the monopoly. However, the working contracts might be limited, since the contract of the operator is also limited (ibid.).

Finally, one can argue that not much changes for a public operator compared to the situation of having an integrated production. The responsible people often remain the same; only the budget is going to be decentralized. As a result, many of the same problems occur, which have previously been there (LeGrand & Bartlett, 1993). Thus, politicians can still influence a public operator and make decisions that affect efficiency. In fact, under this system, the monopoly prevails under a new contractual guise that is eventually limited in time to be renegotiated.

Threat of Competition

If the purchaser decides the performance is poorer than it could be or that the price is too high, then he/she has the power to threaten the operator by inviting competition so that the monopoly is endangered. A "threat" scenario does not

involve the use of competition, but the public authorities use it in order to enforce their ideas in the purchaser-provider relationship. De jure, nothing distinguishes it from a contracting scenario, but in regards to economic theory, the monopolist can no longer charge hefty prices. In order to please the purchaser and to secure the monopoly and thereby the company's future, the monopolist will try to reduce costs by all possible means (Acutt & Elliott, 2001).

In the threat scenario, two issues are important: the monopoly and pressure on both management and employees. It also implies that a monopolist can be forced to produce more efficiently when under the pressure of competition. Thus, a mere threat gives a strong incentive to improve efficiency. Underlying this concept is the idea of "contestable markets" as described by Baumol et al. (1988). A potential entry into the market is as effective in disciplining the producers as is real competition, if there are no restrictions to adding new players. Knieps (1993) claims that a competition threat will wipe out cost inefficiencies in the bus sector. Of course, the threat is only useful if there is indeed a potential competitor (Kähkönen, 2010).

In a threat situation, the relationship between purchaser and provider is affected and may become more difficult. Management will take the threat as a warning. The relationship with the purchaser is undermined, and there may be disappointment on both sides. First, the purchaser is disappointed by the operator's performance; then, the operator is disappointed by the purchaser, which threatens the operator's existence (Ibid.). In order to please the purchaser and secure the monopoly—and with that, the company's future—the monopolist will try to reduce costs by all possible means.

The remaining workforce is increasingly under pressure, since the operator is forced to cut costs and will expect the employees to partly compensate by improving their individual productive efficiency. Experience shows that salaries drop, workers may lose their jobs, social benefits are abandoned in work contracts, and workload-per-time-span (stress) and overall work time increases. Working contracts are likely to be a fixed term because of future uncertainty about the existence of the company. All these factors lead to lower job satisfaction and reduced attractiveness of the workplace, so good personnel may be difficult to find (Haatainen, 2003).

Job losses not only create problems for the individual but also affect society because it has to support the unemployed instead of receiving income tax from the employee. After being laid off, the worker gets unemployment benefits, and after a certain time span, which varies from country to country, workers receive social support. While some argue this is only relevant until they enter new jobs, it actually

remains permanently relevant because shifting to new work means taking away a potential job from someone else.

Competition through tendering

In this model, we discuss a market-like situation. When the purchasing authority decides to put the whole or parts of the service out for competitive bidding, it is called tendering. This does not mean that any provider can freely enter the market, but the authorities plan to have an auction for different operators willing to provide the predefined service (Walsh, 1995). The interested companies submit their bids, and the purchaser decides on the winner, who then gets the exclusive right to provide the services through a contract. Competitive tendering is sometimes referred to as a quasi-market in a pars pro toto manner. However, this study uses a broad definition of quasi-market, of which competitive tendering is just one variation.

Tendering is a popular regime for organising public transportation in order to reduce costs and improve efficiency. It benefits a market organisation while also maintaining control over the regulatory environment (Evans, 1987). Henscher and Wallis (2005) describe competitive tendering as "a service delivery strategy and member of the broad class of contractual regimes. An effective contractual regime is one within which the government, the regulator, the operator, and society at large can participate as trusting partners in securing value for money" (p. 297).

There are necessary conditions for having such a "contestable market" (Baumol et al., 1998). Both entry and exit need to be cost-neutral, and there must be sufficient information on the market so that no additional seeking costs are accrued. These conditions are so-called market-entry barriers (Weiss, 1999, based on Bain, 1956) and reduce the dangers of a monopoly being really challenged. Such costs can be detected in the purchase of infrastructure, training costs, and the employment of workers. Again, Weiss argues that the barriers are only relevant as long as the costs are irreversible, but financing costs appear in the form of investment loans (Ibid.). Of course, a competition requires the interest of several operators in order to have an effect. If the conditions discussed are met, public services can be subject to both potential and active competition. If there is insufficient interest, one can speak of quasi-market failure (Kähkönen, 2007).

The tendering process includes several steps, causing recurring transaction costs. The planning unit determines which services (like bus lines) to combine and for how long to make the contract. Situations of cream skimming must be avoided, which

means only profitable services may be requested by the private providers, whereas deficits fall to the public. The tendering procedure is arranged, and the bid offers need to be compared according to the set criteria. Then the winner is declared, and the contract is set up, with the contract incurring costs as described above. Also, the city's own provider needs to prepare for the tendering and submit a bid if participating. This adds to the costs, as with the bids by all the other operators. The cost is not direct, but the costs for this and other bids are sunk into the offer. The decision and declaration of the winner is a legal procedure and may be challenged by a losing bidder, who could take the case to court. The transaction costs also apply here (Coulson, 1997; March, 1998; McMaster, 1998).

There is no guarantee that tendering leads to real competition. After a while, contestants tend to merge, and there are tendencies to make agreements with other operators. In fact, the degree of competition diminishes over time because the private companies see a chance to maximize their profits by acting in collusion with each other (Gomez-Lobo, 2007). According to Kähkönen (2007), tendering may also be subject to failure when there is a lack of interest from other companies. This can happen especially in smaller towns with such small volumes that no operator is interested in providing the service. Additionally, when the regulations in the offered contract are too restrictive, it has been reported that the tendering leads to no results. In that case, the public authority has lost the time and money invested in the process (Van de Velde et al., 2008).

When a provider loses a competition, workers lose their jobs, resulting in further costs. Workers may organise strikes and legal proceedings. Such problems can be avoided when the winner has to take over the personnel of the previous operator. This solution has been reported to raise the prices. When a public provider loses a competition, it may happen that it ceases to exist and is dismantled (Haatainen, 2003). As a result, the public loses property and influence on the market. Alternatively, a forced sell-off may cause low revenue. Either way, working facilities will remain unused, such as empty office space.

For the providers, competition may lead to unhealthy economic behaviour when they offer underpriced services in order to secure a market share or their survival. They may operate at a loss and run into economic problems in the long run (Valkama & Flinkkilä, 2003).

Competition basically reduces the operator's unit costs, as Karlaftis and McCarthy (1999) report and as confirmed by many other studies (see Hilke, 1992 and Kulmala et al., 2006 for an overview). However, we must ask how this gain in productive efficiency is created. Usually the labour costs fall together with the working

conditions. Again, Haatainen (2003) found in her study on Helsinki that the fear of job loss and deteriorating conditions caused strikes among the bus drivers. One reason for cheaper service production is that fewer workers are employed and lower wages are paid. Pressure to be highly efficient is passed down to the individual level, creating worker stress with more workload per person, including overtime. The pursuit of efficiency through poorer working contracts and higher pressure on the job causes jobs to lose their attractiveness; it may be difficult to find any workers willing to take the job. Moreover, the contracts will always be limited, as the operator is uncertain about retaining the contract in the next tendering round, leaving the employees uncertain about their future situation. As a consequence, stress-related diseases may occur, accompanied by sick leaves. In combination with this phenomenon, the workers' motivation drops (Syvänen, 2003; Kähkönen, 2010).

Giving one example from the transportation sector, different operators need to be coordinated when bus timetables or when a fare system is introduced (Tyson, 1995). Coordinating larger projects, like the introduction of a smart-card system or dynamic information services, especially requires more resources than for a single operator. Ticket-sharing negotiations can also be tricky in a multi-player environment. Moreover, corporate identity measures have to be defined so that the customer recognizes which bus is part of the LPT network and which is not (TMP 0). These costs also fall under the recurring transaction costs (cf. Marsh, 1998).

The customer has some negative effect resulting from the fact that various operators are offering their services. Appropriate measurements can eliminate all of these effects, but costs will rise as a result. First of all, the timetable coordination may offer worse services when the scheduling is made by the operators. They seek to optimize their own efficiency and do not care about disadvantages for the customer like long waiting times at one bus stop or connections. The user wants a fare system that allows him to travel with one ticket on different buses, which needs to be negotiated between operators and the public authority. Experiences show that companies use different vehicles, so the customer has to recognize the buses he can use. This so-called corporate identity needs to be created and applied. Finally, it will be difficult to find out who is responsible for customer relations, like answering complaints, so a central point will be established for that (TMP 0).

Competitive tendering also leads to strategic inflexibility because the planners or coordinators are bound by existing contracts. Typically, these contracts expire in different years, which consequently means that a major reform can hardly be carried out because it would have to be done all at once. After it is decided, the next rounds of tendering have to be adjusted to one term according to the longest-running

contract; thus, the reform can take over 10 years in the transportation sector, for example. For smaller network adjustments, there needs to be a costly flexibility premium in the contract or new negotiations (compare the cases in Chapter 5.3).

On the positive side for the competitive tendering scenario counts is that there is no monopoly pricing possible unless the operators collude illegally. Then, market forces supposedly make inefficient operators disappear. In the contract, the purchaser can include performance incentives to further stimulate quality. A private employer can also include performance premiums in the workers' contracts and thereby raise motivation and individual efficiency.

Ownership: Public enterprises versus privatisation

Public services have a particular standing within the structure of an economy. Typically, they involve subsidies because it is impossible to run these services for profit. The reasons for this trend can be found in various kinds of circumstances, which cause markets to fail. These failures can be caused either by the producer or the consumer and include characteristics like externalities, asymmetric information, free riding, or output-measurement difficulties. Consequently, market failure was in the past compensated by the provision of public goods (Walsh, 1995; Brons et al., 2005).

Owner structure does matter, as Milward and Parker (1983) describe in their comparison of both modes of ownership. The theoretical difference consists of the fact that a private entrepreneur asks for profit and is a profit maximiser. On the other hand, as a positive side effect, private companies are willing to innovate new—and potentially more efficient—ways to provide services. Welfare preferences are not clear because on the one hand, the private company has more incentives to be efficient, but on the other hand, they pursue profit and mainly follow their own interests.

Private operators also require profit in public services like in any other business. Usually, at least 5-10% profit is considered necessary for survival and the satisfaction of investors' interests. This surplus needs to be gained in operation and makes the private company initially more expensive, so the privately owned producer needs to be at least 5% more efficient to offer services at the same price as a public producer. Private companies might try to offer cheap services by secretly reducing the service level; therefore, it is even more important to observe their performance (Knabe & Sörensen, 2006). Providing services on a line means that the operator gets exclusive

information about the demand level, so there is information asymmetry. This asymmetry then can be used to give false information to the purchaser and planner for the next contract. Sometimes there are technical solutions to this problem, but they cost money for the purchaser or the customer.

Private operators might try to offer cheap services by secretly reducing the service level; therefore, it is even more important to monitor their performance (Knabe & Sörensen, 2006). Providing services means that the operator gets exclusive information about the demand level, so there is an information asymmetry. This asymmetry then can be used to give false information to the purchaser and the planning unit when it is working on the next contract.

Public organisations can utilize synergy-effects. For example, transportation planning enjoys distinct advantages of vertical integration, making their work better and more efficient. Bus lines and timetables are adjusted to the working times of the bus drivers, thus reducing costs (TMP 0). Since there is only one operator, there is less trouble with coordinating the services; for example, timetables can be optimized for passengers so that "gaps" in the schedules are less likely to occur.

Planners in a public environment also enjoy a great extent of strategic flexibility if they need to make changes, since a detected change in demand can lead to an adjustment in service fairly rapidly without taking the fulfilment of contracts into account. Finally, the planning unit can rely on safe figures from the own in-house operator and work with these, as the operator has no reason to provide incorrect data. The planning unit does not need to buy the data from the operator as it gets the data automatically and directly as it is part of the same unit.

However, the organisation of services by public authorities has been seen as prone to failure as well. Public choice theory finds the potential for savings in government failure, inappropriate structures, slack, waste, and lack of incentives. One typical criticism towards the public administration related to a missing incentive on the management level is the lack of innovativeness, so that the same routines dominate and new alternatives are not attempted. Also, the bureaucracy has often been accused of inefficient working procedures, which can be abolished through the pressure of market efficiency (McMaster, 1998). Inflexible structures are features of vertically integrated public operators. In order to react to unforeseen challenges, authorities establish a "slack" (i.e., redundant structures [March, 1988]) as a reserve. This slack is controversial because it means paying upkeep for mostly unproductive parts. Inflexible structures boost transaction costs if one wants to react to unforeseen challenges spontaneously or make it entirely impossible to react at all. Therefore, some slack is needed as a reserve (ibid.).

As stated previously, public managements have no initial reason to improve overall efficiency because the city automatically covers all deficits, and a higher deficit does not lead to consequences for the unit. It also means that there is always the danger that the service needs more subsidies than predicted, and therefore, the cost control will be rather weak.

Regulations and standardized work procedures can prevent a system from working efficiently because of strict and inflexible administrative rules. On the other hand, standard procedures were introduced to make administrative work more effective. Regulations and procedures are very often backed up by laws, so it is hard, if not unfair, to compare the legal constraints of a public unit with those of a private company (Milward & Parker, 1983).

As mentioned above, x-efficiency as individual work performance factor is significant for the productive efficiency of an organisation and is challenged by a lack of individual influence, by pressure, or by frustration (Leibenstein, 1966; Syvänen, 2003). On the other hand, it may also be problematic that there is too little pressure on the employee, since jobs are too safe and there is little chance to include incentives to do good work. Still, generally safe jobs with good working contracts can lead to high work satisfaction and good performance. Work satisfaction also improves with mutual trust among the actors when a successful long-term work relation has been established (Ibid.). Private-owner status allows the employer to include incentives in the contracts with the workers and thus improve their individual motivation and efficiency. The employees also have more influence on their own work in an independent company, and working procedures are supposedly more efficient than in a public administration (Kähkönen, 2010).

Some scholars regard the ownership aspect as obsolete. Aulich (2011) claims that ownership as a distinction as either public or private is secondary and instead certain aspects of ownership are more important. The dissection of ownership into smaller factors is an improvement to the bipolar public—a private distinction—and shifts the significance towards "publicness" in the sense of public scrutiny. Others see the previously clear distinction between public and private becoming blurred in reality and call the new mixed forms "hybrid." For example, according to Wettenhall and Thynne (2005), the classic distinction is from an analytical point of view "over-simplified and in need of qualification" (p. 264). The hybrid organisation can take a large variety of forms, depending on legal arrangements, economic shareholding, and internal structuring. As Wettenhall and Thynne (2005) point out, one public aspect is that community service demands are covered. However, through contracts, private companies can also be obliged to carry out public interests as well. While the

traditional role of a public company is a policyholder and implementer, private firms are regarded as contributors. In mixed companies, the line becomes blurred and the company has to cover both. However, even they acknowledge the approach that government-led companies are more bound to legal restrictions and procedures than privately owned firms and see the public companies more of a policy implementer and the private companies more as a contributor. The case study in Pforzheim (Chapter 5.2.1) will show how it works in practice and how the hybrid works both ways. One aspect of this is also the ownership of assets.

Reichard (2006) introduces and extends the ownership aspect into a triangle with hybrid forms as a third dimension (p. 482). He shows many possible forms of mixed ownership, depending on the arrangement between the partners. Some of them are relevant for LPT as well. He emphasizes that a strong collaborative bond is replaced by competitive elements and expresses the need of balancing cooperation and competition. While it is correct that mixed forms exist, Reichard (2006) does not offer insights about his choices nor do the different forms of PPP back up his decision to introduce a third dimension other than the fact that it is "different."

Why avoid hybrids

This study is designed to qualify the distinction between public and private ownership, taking into account the realities of mixed approaches in the case studies. However, for a number of reasons, this study presumes that there is a considerable difference between the two ownership models and that the case studies help to pinpoint those differences.

This study uses a dichotomy on ownership, which highlights the differences between public and private ownership. Hybrid or mixed ownership is a residual, collective term for an in-between category in regards of ownership just like the quasi-market (see Chapter 2.3) is for market organisation. By design, it attempts to sort out the quasi-market haze by giving a clear structured approach. Applying this same orderly structure to the hybrid form would spike the complexity beyond a reasonable level, since there are a number of components within the organisational framework, leading to many variations of the hybrid. Hence the number of case studies would increase substantially. The results are expected to gain clarity by investigating the two extremes and leaving hybrid forms out as a category. No added value is expected from forming one specific "hybrid" category.

However, this study deals with hybrids as a realty due to the fact that two cases share their network between public and private providers (Chapter 5.3), and public

operators buy private ones (Chapter 5.1.1) or share ownership over a joint operator with one "dormant" partner (Chapter 5.2.1). In the case studies, the implication of hybrid components become visible.

2.3.5 Summary: The characteristics and alternatives of quasi-markets

A "quasi-market" is thus regarded as any arrangement or form between integrated hierarchical services organised by the public administration and an unregulated market. To some extent, it has traces of a market, but in many respects, it differs from a market. On a wide scale, the quasi-market exists whenever the city administration buys services from outside the administration (cf. Le Grand & Bartlett, 1993 or Walsh, 1995). Most notably, it separates functions such that the provider or operator is isolated from the public administration. This move is called purchaser-provider split. The provider is an independent unit like a company with its own management. This independent unit is legally bound to provide services by means of a contract. This contract, however, is an agreement between the provider and the purchaser instead of the user. Therefore, the city continues to define the demand of the customer and leaves the position of the customer unchanged.

In order to establish a quasi-market and maintain it, there need to be several (pre-) arrangements, which can be detected in the form of transaction costs. These transaction costs are included in the discussion in detail. Some costs emerge only once initially; other costs are recurring. In order to get the whole picture, one also should consider the costs to abolish the quasi-market when it no longer seems feasible (Kähkönen, 2005). According to the same author (Ibid.), it is evident that creating quasi-markets produces some costs which reduce both technical and allocative efficiency.

Other structures in the quasi-market are alternatives: The provider may be owned either by the city or by a private owner. In both cases, the provider can be a monopolist and therefore is temporarily protected from competition, as a contract gives exclusive rights to the operator. A modification to this is a "threat" scenario, where all circumstances apply except when the purchaser puts financial pressure on the provider by announcing that he may not extend the contract. Although this hardly qualifies as a distinct scenario from the one above, its implications for a monopoly are significant. As the next step, we have a competitive environment. The former monopolist is (potentially) being replaced by several independent operators

competing against each other to provide a service. The local authorities conduct a tendering round for which interested operators may submit an application. Typically, the service is separated into parts, and different operators may end up winning one tender. Moreover, the city's own company may take part in such a tendering round (Walsh, 1995; Le Grand & Bartlett, 1993).

Altogether, there are five substantially different prototypes for providing public services, which in reality may occur within one city and sector as mixed forms. Each approach differs to the degree of market application, from a protected monopoly to forms resembling the market regime. The possible alternatives are as follows: in-house-production; contracting-in and contracting-out, including a threat scenario; and tendering are shown below in the diagram (see Fig. 1).

Blom (2001, following a 1994 publication by Means & Smith) demonstrates an attempt to categorize the different organisation modes. He identifies three basically different approaches of service organisations as follows: the welfare state model organised by the integrated public administration, the quasi-market model, and the free market model. Below, this scheme is extended by the institutional setting of service provision and marked according to its application in different models (cf. Seidel, 2009; Kähkönen, 2004).

Fig. 1: Alternatives in public service delivery and the degree of market application, own scheme)

	Hierarchy	**Quasi-Market**			**Market**
Contract		yes	yes	yes	
Competition				yes	yes
Privatisation			yes	partly	yes
	Public Administration	**Public Monopoly**	**Private Monopoly**	**Competitive Tendering**	**Free Market**

The difference between the hierarchical model and a public monopoly model (1) is that the service obligation has shifted to a contract. The differences between the free market and the quasi-market competition model (3) are the absence of a contract in the free-market model and the fact that quasi-market (3) is market-managed by the authorities, so competition is for the market rather than in the market.

2.3.6 Application of the efficiency concept in this study: Efficiency issues in local public transportation from an institutional perspective

This study tried to identify social utility improvement potential in local public transportation and is situated therefore in the tradition of welfare economics. The welfare maximum will be realized when the service is produced in the most efficient manner. When investigating local public transport, it becomes obvious that four different players are usually involved in the service overall. First, there is a decision-making body that acts as a purchaser on behalf of the users (LeGrand, 1993) and decides how much money is available for the support of public transport. As a political institution, the same unit also decides how the whole service is organised, what shall be within the responsibility of the administration, and what shall be given to outside companies. It also acts as a purchaser in the quasi-market and pays the subsidies. As a result, the question of which way is most efficient to organise local public transport is central.

Another task for the public authorities is to invoke a coordination unit that takes care of the official proceedings, like running the competition and evaluating the performance of the operator (Challis et al., 1994). The planning unit reveals the demand and defines the level of service and may also be part of the administration/purchaser. As an alternative, the planning unit may be integrated into the operator, who represents the second group. The operators run the service after they obtain permission to do so. They produce a defined amount of service with a certain quality. Their management follows their company's own interests, such as ensuring the survival of the company, and in case they are private, is also profit

maximizing. The operator employs the workforce, the third group. These employees prefer a stable job, good salary and bonus benefits, and a low stress level. It may make a difference to them if their employer is public or private, depending on how their basic interests are realized. Finally, there are the users for whom the service is organised. Users like good quality and low prices. Basically, they do not care how the transportation is organised, if there is a competition, or if the operator is public or private. The quality and the price level may be affected by the organisation factor, so the purchaser tries to make the organisation neutral to the customer by defining service-quality standards.

Since several distinguishable actors with distinct tasks and interests are involved, evaluating the efficiency of each unit and the interactions between them is feasible (see, for example, Williamson, 1985; North, 1986; Challis et al., 1994). In order to assess potential inefficiencies, the organisation of the service needs to be regarded. Each of the players and each interaction are checked for potential inefficiencies in each of the regimes in question, and how these inefficiencies can be avoided is discussed. For example, one question is how the contract between the purchaser and provider can be optimized. This approach is called institutionalizing. The following players are involved: the purchaser (+planner), the operator's management (+planner), and the employees and the customer. In order to assess potential inefficiencies, the organisation of the service needs to be regarded. There are several players involved in the provision of transportation, so efficiency needs to be applied to all players.

The table below shows relations and details that are "relevant" in the sense that the organisation method will likely affect the relationship and the efficiency of the players. Other relations are marked "constant." The question was whether the efficiency of an actor or the interaction of two actors is influenced by the decision of the market organisation and ownership. The answer is "relevant" for the relationship between the purchaser and provider because there is a higher need for coordination and inflexibility within the contract between the two parties in the quasi-market compared to the hierarchical system. Above that, there is a difference if the operator is from the same house or private regarding, for example, information flow. The answer is irrelevant or "constant" for the relationship between the purchaser and the customers. The city tries to find an optimal balance of subsidies and service level for the customers, regardless of how it is organised (the shift from the administration calling the customer "a transportation case" towards "user" or "customer" took place before the quasi-market changes, see also below). In the categories where two identical groups are matched up, the question is if there is an

internal effect to the actor, such as a shift of targets or behaviour. For example, the provider acts differently in a monopoly than in a competition. On the other hand, the purchaser does not.

Fig. 2: Actors influenced by alternatives in market organisation and ownership, own scheme

	Purchaser	User	Provider	Employee
Purchaser/Administration	Constant	Constant	Relevant	Constant
User/Customer		Constant	Constant	Constant
Provider/Operator			Relevant	Relevant
Employee/ Worker/Personnel				Relevant

Each of the players and each interaction are checked for potential inefficiencies in each of the regimes (see Fig. 1) in question, and it is discussed how these inefficiencies can be avoided or at least reduced. For example, one question is how the contract between the purchaser and provider can be optimized. This approach is called institutional. Additionally, when defining efficiency, it is necessary to think about how to measure it. It appears that the problem of measurement of the sub-definitions cannot be solved (see Chapter 3), so it is only sought where there are potential inefficiencies, and it is considered how these inefficiencies can be negated. There are certainly downsides to this approach; for example, it is difficult to compare gains in one efficiency category to losses in another.

Below in Fig.3 is an overview of the research setting, the use of theoretical concepts, and their integration into the case study.

Fig.3: Use of Theoretical Concepts and their Integration

Fig 3 shows an overview of the use of the theoretical concepts and how they integrate into the study. The institutional perspective identifies institutions and actors as the subject of research (Chapter 2.3). Actors are identified as the city,

operator, employees, and users. The contract, as an essential component of the quasi-market, is one institution; ownership and market organisation are the other two that altogether form three different alternatives as follows: public monopoly, private monopoly, and competitive tendering. These institutions and actors are, by the definition of New Institutional Economics (Chapter 2.2), challenged in their efficient functioning and behaviour in a number of ways. These theoretical concerns by NIE with their efficiency characteristics are discussed and explained in Chapter 2.1.

The practical impact of NIE efficiency concerns is investigated in cases 5.1–5.3. Each organisational approach is studied for inefficiencies of the institution and the actors according to New Institutional Economic Theory. These practical results are then compared in case 5.4 using transaction costs as a systemic challenge and bounded rationality as an actor-bound challenge.

3. Methodological choice for a qualitative case study comparison

The central question for choosing the methodology is as follows: Does the methodology reflect the ontology? Does the instrument we use to describe the world fit the world as we think it is, or are we using a screwdriver to open a wine bottle? If we assume that entities interact with each other in time and space and variables depend on context, our method to assess this system must not assume that these variables are independent of each other. For the recent methodology in the research of social, political, or economic sciences, this means that the theory and analysis of quantitative data do not match (Hall, 2002).

Between NIE and neoclassic economics, there is a methodological tension. According to Samuels (2008), neoclassic (i.e., mainstream) economists focus on the "central economic problems as the allocation of resources, the distribution of income, and the determination of the levels of income, output and prices. By way of contrast, institutional economists assert the primacy of the problem of the organisation and control of the economic system, that is, its structure of power". Neoclassic scholars believe strongly in quantifying data, while bounded rationality questions the availability of quantitative data, its correctness, and its relevance. Laffont (1986), together with Tirole (1993) and Martimort (2002), tried to lay an econometric ground to bring these concepts together. Despite the theoretical value of this effort, the practical use of quantitative data remains doubtful from the perspective of bounded rationality and difficulties in performance assessment (Vakkuri & Meklin, 2006). Porter (1995) even raises doubt about the usefulness of numbers in general when gaining knowledge about a study object (for a more detailed discussion of the qualitative versus quantitative choice, see the end of this chapter).

This study takes a qualitative approach to investigate the alternatives in LPT service delivery. It becomes apparent first of all that a large number of variables are influencing transportation service efficiency (cf. Balcombe et al., 2004). None of the reviewed efficiency studies (see Chapter 2.4) have taken this variety into account. In order to introduce some system, this study divides the possible alternatives into prototypes, sorted by their proximity towards the market. The alternatives on both

extreme sides have a different structure than the solutions in the "quasi-market". The previously dominant form of integrated hierarchical organisation (sometimes called the welfare model) in which a public administration bureau would plan and provide the service; this function is now overseen by EU regulations (see Chapter 4.1). On the other hand, the unregulated free-market solution is ruled out in LPT because of market failure (cf. Paredes & Baytelman, 1996; Geroski, 2003; Gomez-Lobo, 2007; see also Weiss, 1999 for an alternative view).

Thus, it finally breaks down to the question of comparing the efficiency of different operator regimes. When does the system provide the best environment for actors to produce public transport efficiently, taking all efficiency considerations into account, such as transaction costs? This approach calls for an institutional perspective since we want to compare the efficiency of one institution with the efficiency of another, including institutionalized regulation measurements (cf. Gigerenzer & Selten, 2002).

There is a serious problem with how to measure and compare efficiency in LPT. Many researchers try to measure efficiency in some input/output ratio, of which popular output indicators are service kilometres, passenger kilometres, working hours or vehicle kilometres (Rosenberg & Räsänen, 2005; Pina & Torres, 2006). When comparing different cases, all of these indicators are misleading because factors like town size, network structure, average speed, late hours, and weekend traffic have an effect on the efficiency calculation and are systematically ignored. One could think to solve the problem on a time-series basis, comparing the same case town over years. However, one encounters difficulties with network and timetable changes on the margin, which influence the overall efficiency. Such changes are in the hands of the planning unit and are not caused by the producer. For a comparison, a large problem also occurs for the ceteris paribus assumption, which means that one acts as if all other input factors remain the same when in reality they are not.

This brings us to the problem of how to detect causalities. After the city announces a reduction in subsidies, how much of the following growth in productive efficiency is due to a structural efficiency advance or a cut in the more expensive parts of the service? The problem of detecting causalities emerges, since the decisions to cut subsidies and change the producer's status are being made simultaneously. According to Abbott (1988), Western (1998), Seawright (2005) and Shalev (2007), this causality in efficiency increase cannot be derived from regression analysis but needs to be developed on a qualitative level (for a further discussion between the qualitative and quantitative approach, see below).

Eriksson and Kovalainen suggest case-study research for getting a "detailed and holistic knowledge" (2008, p. 117) on a study subject, saying that it "makes room for diversity and complexity" (ibid.). In this sense, a case study seems a perfect match for an analytical approach using NIE theory, which tries to obtain a holistic understanding (see above). In a closer definition of a case study, Eriksson and Kovalainen (2008) distinguish two types. Intensive case study research targets understanding of the case by providing a holistic and contextual approach. On the other hand, an extensive case study can be used for elaboration, testing, and generalizing. One method here is a comparative approach (ibid.). This study needs both a deep understanding of the study object as well as a generalized conclusion, so consequently, this study consists of both an intensive and an extensive aspect. The order of first gaining a detailed understanding of the cases (Chapter 5.1 through 5.3) before elaborating by comparison (5.4) is obvious (Ragin, 1994). In the generalization process, it is important to point out particularities. For that reason, each organisation model has a "backup" to extend the knowledge.

The definition of what is a case is a central aspect of a case study (Ragin & Becker, 1992). There are four possible entities that could constitute a case: As for the smallest unit, Eriksson and Kovalainen (2008) suggest one individual as the simplest case entity. One individual or a group of individuals corresponds to an actor in institutional economics, making one actor as one case. The actors together with the institutional framework form a city case, which is the next level of a case. Then, similar city cases can be grouped as one organisational study case. Finally, the city cases of one country can be grouped. When deciding on the case level, one needs to consult the theory (ibid.). This study emphasizes differences in organisational arrangements and targets to compare different organisational forms; consequently, one organisational complex should be a case. Referring to Chapter 2.3, there are three cases: the Public Monopoly Case (5.1), the Private Monopoly Case (5.2), and the Competitive Tendering Case (5.3).

Before selecting the case cities, the question remains regarding the number of cities and where they should be situated. Should they be from the same country, and is it necessary to have more than one for an in-depth study? The minimum number would be three: one for each organisational form. Taking the samples from one country would avoid "noise" from the different national settings when comparing the organisation forms, so it was decided to take three cities from the same country. In fact, this noise in the data would not be negated but would be constant instead. In order to make the data sound and improve their validity when making generalizations, it seemed useful to have at least one case each to back up the

findings, so the overall number would be six. These three cases should be from a different country in order to filter out the national constant influence on the data. It was decided, however, that these backup cases would be used as a reflection of the primary three cases so the workload could be reduced. An exception was made, however, in Chapter 5.3.2, where Helsinki proved to be a particularly interesting case and was given extra space.

The countries have been selected for the legal background, cultural similarities, and finally practical matter, since the author is German and the residence is Finland. Cultural similarities are identified by Hofstede (2001), who finds cultural similarities in terms of power distance, individualism, risk avoidance, and long-term orientation (ibid.). Using similar countries has the advantage that results can be related to legal or structural differences in the administration. A study with different cultural groups possibly leads to different results, and a cross-cultural study might be dominated by cultural effects. Finally, both countries are member states of the EU—Germany from the beginning and Finland since 1995—and are therefore part of the same regulatory setup. As Walsh (1995) notes, the European Union liberalised the economic situation in several sectors in Europe. Important markets are energy, telecommunication, and transport, which all have been monopolies in many countries. Liberalisation in this context means that markets have to be open for new competitors to enter, and barriers have to be abolished (Walsh, 1995). Although, de jure, Germany has had a free-market system in LPT and anyone could start a competition, de facto, the market was a public economic monopoly. Thus, the EU had to change the legal framework in a way that would enable competitors de facto to enter the market (cf. Ewers & Illigmann, 1999).

For the case selection, the following criteria were regarded as essential: typicality—in which sense the case would represent other cases; clarity—how much the case is congruent to the theoretical setup; accessibility—how much data are available, including the willingness of actors to cooperate; the amount of prior research (i.e., secondary literature); and comparability —the cities should be of similar size. All case cities either fulfil all the criteria or are the best choice compared to other alternatives.

Frankfurt and Helsinki represent the category of competitive tendering. Both cities are regarded as prominent examples of their organisation form, have been subject to both national and international research, and apply the competitive tendering structure in a very clear and typical way (Schaaffkamp, 2000; Rehn & Valussi, 2006; YTV, 2001a). In Helsinki, the smaller operators had no interest in joining the study, but with the public and one big private provider, the data can be

regarded as sufficient. In Frankfurt, all operators agreed to participate in the case study.

For the public monopoly, Tampere was the only Finnish city with an uncontested public monopoly at the start of the study (Lahdenranta 2000), so the selection had no alternative. Now the city is gradually shifting its organisation form; it cannot be regarded as typical anymore and is called Tampere 2008 for that reason. However, the data collection began before the shift, and the change brings valuable additional data for understanding the city's characteristics. All informants were already in place during the previous system and were asked about the situation prior to the change. Wuppertal was selected for practicality's sake so I could make the case study as a visiting scholar to the University of Wuppertal. One aspect of the city's transportation system is special, but the monorail does not cause inefficiencies in the organisation of bus transportation.

The private-monopoly city of Jyväskylä is typically representative of its kind and is the largest city in Finland that uses this organisational approach (Rosenberg & Räsänen, 2005). It was also chosen for its proximity to Tampere. Pforzheim was a more difficult selection; of the few German cases in question, this was the most cooperative and accessible one. However, the structure is not a clear monopoly and not entirely private. There are still very few cities with a purely private monopoly in Germany. One of the first cities to apply this approach has been investigated, but the operator refused to cooperate. Although it would have been an interesting case otherwise, without the crucial support of the operator, this city could not be included in the study. Consequently, other cities with the same operator were excluded from the list of possibilities, since the refusal was categorical. Pforzheim was then taken as a replacement from a very limited number of options, despite the operator being created from a tendering and the public having a minority share in it. It turned out that the case behaved very differently from its counterpart Jyväskylä and had some similarities to the competitive tendering scenarios. However, this outcome is an additional result.

Regarding data collection, the cases were examined predominantly with the help of semi-structured interviews with key actors in each city (see Appendix), as suggested by Eriksson and Kovalainen (2008), apart from documents and media texts. With the help of the theory in Chapter 2, key actors were identified as the city, the operator(s), the workforce, and the users. The readiness of key actor representatives to be interviewed has been an essential requirement for a case city to be included in the study. Therefore, in each city, interviews were taken from the responsible purchaser unit from the city administration, the manager of the

operating bus company (in case there were multiple ones, at least one public and one private), a representative of the drivers, and the users' interest group (if existent). Apart from the interviews, case study data came from publications in periodicals and reports as well as newspapers. The bigger cities of Helsinki and Frankfurt have also been subject to scientific research, providing additional secondary literature.

The next step was analysing and interpreting the data, as detailed in Chapter 5. Again, Eisenhart (1989) emphasized the significance of correct data analysis within the research process in order to extract the most information out of the existing data and increase reliability. She suggests three different methods of data analysis, which were applied here. Following these recommendations, the case data are processed in three different ways. First, there is a within-case study of the six cases, with each having its own storyline, followed by a pairwise comparison as a second step, as described in Chapter 5.1 to 5.3. Finally, the results are compared across the three categories in part 5.4. When analysing the data, Eisenhart puts the researcher in a crucial position, since his or her judgement may easily be clouded. For this reason, the first step on the case studies is rather extensive, so the reader can follow the analytical process. Self-awareness and spelling out ideas is one tool, but also giving the informants the chance to bring up topics that they regard as important should reduce the bias of the researcher. In fact, this aspect has been addressed by using a semi-structured type of interview. For the data collection, the interviews were all conducted by the researcher himself so there would be no variance in the interviewing technique. Another positive aspect of the present strategy is the possibility of avoiding the danger that the researcher could ignore findings that do not fit into the concept. As the case study results are neutrally tested against the theory, there is no incentive to protect the construct against unfitting evidence; instead, this evidence is regarded as an additional contribution. What Eisenhart calls "shaping the hypothesis" is applied to this study as a check of theory. In fact, the hypothesis is derived from theory, while the case studies verify the relevance with an emphasis on how different organisational setups influence the efficiency outcome. The case study comparison then provides a modest "real-life" contribution to institutional economic theory in Chapter 5.4 from the perspective of LPT, which applies the iteration principle demanded by Eisenhart (1989).

When thinking of how to handle qualitative data, Eisenhart's research strategy paper from 1989 shows how to extract information from case studies and most importantly draw conclusions from it. Although this study does not intend to create a new theory, it is useful to test the relevance of existing theory by applying the very same strategy. This study applies a case-centred approach for understanding

mechanisms and revealing causalities of inefficient behaviour. The rationale of dependency within the case is that the work environment, namely the organisational setup, influences the behaviour of the actors involved and may consequently cause inefficient behaviour. Above all, the organisational setup in itself may produce inefficiencies. Since we find a variety of organisational forms, it is clear that each of the forms needs to be investigated separately. In order to verify the causality, each case should be double-checked by a different case with a similar organisational structure from a different country. This way, the influence of the national framework can also be separated (ibid.). Finally, the organisation models are compared for inefficiency similarities and differences (Ragin & Riboux, 2004).

Since a large part of the data was collected by interviewing stakeholders, special attention towards this method is required also on the interpretation level of this particular method. Alvesson (2011) claims that researchers often wrongly assume that their data produced by interviews is free from bias and that the interviewees speak truthfully and openly about their situation (2011). Awareness of the problem is not sufficient in this context. In order to improve openness, each interviewee was asked if the recording device would bother them, and in some cases, they expressed a desire that it not be used. In two cases, the informant explicitly expressed that the answers would be more frank in the absence of the device. Of course, this does not guarantee the openness of all other informants with which the device was used in favour of the richness and preciseness of the data and the capacity to think during the interview (Ibid.). Regarding bias, a tendency became obvious for interviewees to present the situation in their own favour—a human tendency that presents oneself in a positive light—that their own decisions were correct and that potential problems were not their own fault. For this particular reason, a part of the interviews consisted of questions about the behaviour of other actors where relevant, with the hope of getting a neutral picture, assuming reports about other players would have a less-positive bias. This assumption proved to be correct in many cases. Wherever one outside stakeholder confirmed a positive statement, it was taken as verification and was emphasized. The group who showed the most disparity in this context was the employees, whose interests were largely ignored by other groups but who had strong opinions about the situation.

When thinking of a bias by the researcher (Alvesson, 2011), it is true that the informants' willingness to discuss gives them more credibility than if they were secretive, which raises suspicion. This factor is difficult to overcome, despite its recognition. Only standardized methods such as double-checking answers routinely may help with this problem. Another bias problem might emerge when the study is

work-on-demand (ibid.), but this study was not influenced by any actor since outside funding has been provided. To be completely honest, the researcher became sympathetic to the situation of the employees during the cause of the study, since their situation has worsened. The way to deal with this sympathy is to share the data and make the reader possibly sympathetic about it as well.

The data analysis follows the institutional worldview of the NIE. There are two areas of interest: the institutions and the actors. The question for the case-study analysis is first how institutions (i.e., the contract, the monopoly, the market organisation, and the ownership) may be inefficient. The second question is how the actors may behave in an inefficient manner, eventually caused by systemic inefficiencies. This study provides the answers in Sections 5.1–5.3 for each case separately by investigating the main concerns of the NIE (see Chapter 2.2). Below, Fig. 4 shows a simplified matrix.

Fig. 4 Matrix of Institutions and Actors vs. Theoretical Efficiency Concerns raised by New Institutional Economics

Institutions and actors -> / NIE concerns	Contract	Monopoly vs. competition (market organisation)	Public vs. private (ownership)	Actors 1-4
Bounded rationality				
Transaction costs				
Public choice				
Contracting[3]				

[3] Note that the contracting theory is naturally about the contract and does not need to be used twice.

Property rights			[4]	
NIE history[5]				

This approach allows for the identification of efficiency problems more precisely. The case-study analysis follows a narrative for each case based on the historical development of LPT in the city. The historical approach serves as an explanation for why we find the situation as it is but does not provide explanatory power beyond the other concerns related to efficiency. For example, the fear of actors to make changes and the tendency to stick to certain structures is a historic element but is well explained by avoiding transaction costs and bounded rationality in the form of limited know-how and the fear of the unknown (see Chapter 2.2).

Generally, the case study follows the question of what inefficiencies do occur in institutions and actors (Research Question 2: How are the inefficiencies experienced in practice – Chapter 5.1-5.3). The analysis of the cases is based on a systematic link of rows and columns. For example, (x1; y1) combine bounded rationality with the contract. The content will then be about information asymmetry, difficulties in predicting the future, etc.

After the case analysis, a case comparison in Section 5.4 follows, answering Research Question 3: How does the institutional setting influence the observed inefficiencies? This analysis reveals how some inefficiencies arise only in a certain context while others show up in a different form, revealing that NIE is therefore relevant. This analysis is based largely on the division of systemic transaction costs and individually bounded rationality (compare with Chapter 2.2.). Below is a matrix of the comparative analysis (Fig.5).

[4] Property rights are defined as the difference between public and private. Hence, it constitutes a double entry, which can be reduced in the process.

[5] NIE history serves only as an explanatory theory to understand the present situation, while its efficiency aspects are covered by the other theories.

Fig. 5: Comparative analysis of the provision models and the related efficiency concerns

Organisation model ->	Public monopoly	Private monopoly	Competitive tendering
Efficiency concern			
Transaction costs of the system			
Bounded rationality of the individual actor			

As briefly mentioned above, a central aspect was the decision for a qualitative study versus a quantitative one. Although many scholars would expect a study about efficiency to be quantitative, this research uses qualitative methods because the efficient provision of LPT is seen as a complex process with interdependent variables (Ragin & Riboux, 2004; Shalev, 2007). This study focuses on causes of inefficiencies and consequences of decisions within the quasi-market; therefore, each case needs to be investigated in detail on a qualitative basis. While searching for a tool to investigate efficiency aspects, behavioural economics became a promising candidate, and institutional economics proved to be especially helpful. From this theory, it became clear that at least three different organisation forms for LPT exist, which need to be investigated separately.

As Leiberson (1992) argues, small n-studies have the problem of over-determination, meaning there are more explaining variables than cases. This often leads to the problem that a large number of possible explanations compete for influence with not enough criteria to sort them out. The result will be that there are some variables left for discussion, and argumentation has to determine the right dependency from the by-chance correlation. Models derived from a small case number also have difficulties in being robust in the sense that the outcome already changes when one case is added or reduced from the sample. On the other hand, the advantage of a small n-study is the possibility to analyse data precisely. The researcher can also devote energy to investigate details and gain explanatory power (Shalev, 2007).

Esping-Andersen (2006) contrarily argues that the most valuable information of—for instance—regression analysis lies in the residual plots, which would stimulate the dialogue with cases. A small number of cases would help because each plot would have "a name." In contrast, Abbot (1998) argues that the world of linear thinking used by multiple regression seems to be a black box with variables to feed and an end result, knowing that the process in the black box is wrong but nevertheless always results in the right answer. It is correct because the box is able to adjust its calculation to match the reality of its input. The outcome, unfortunately, is not worth making any prediction or explanation about what is really going on. In this regard, Abbot (1988) contributed the following:

> Many sociologists treat the world as if causality actually obeyed the rules of linear transformations. They do this by assuming… that the social world consists of fixed entities with variable attributes; that these attributes have only one causal meaning at a time; that this causal meaning does not depend on other attributes, on the past sequence of attributes, or on the context of other entities. (p. 181)

The statistical tool of regression believes means to solve this problem by dividing the change into an unexplained part and an explanatory causality. For the explanatory part, the regression does not take into account that there might be a systematic connection between the political decision to lower the subsidies and change the provider status. There would be a need for control for the subsidy/provider variable. The main problems with multiple regression lie in the assumption of a simplified reality. It is reduced to a characteristic "linearity" in a way, such that the result offers a different phenomenon than what was asked for, and generalisations become valueless in the end, although technically speaking, each single step undertaken had been correct. To which extent is multiple regression able to model a complex human reality? Any model applied to simulate reality is only allowed to reduce such parameters that the results still match the reality, generally speaking. On the other hand, the model itself must be strictly logical in its internal world, with techniques to perform explanations, forecasts and scenarios. Even the strongest of its kind, technically speaking, can completely fail its applicability when the model does not properly simulate reality. In other words, multiple regression with all its strength in logic and technique may be an outcast when the theoretical assumptions made in it as a model do not match the theory abstracted from reality. Multiple regression should not be denied as an important tool to model reality in many aspects of science; however, it can be shown even in easily reconstructible cases that this

technical approach offers alarmingly wrong results, especially when it comes to human behaviour (Ragin, 1987; Seawright, 2005; Shalev, 2007).

An alternative to multiple regression is Ragin's Qualitative Comparative Analysis (QCA) method (Ragin 1987), which is able to contextualize reasons and keeps track of each case. Therefore, a meaningful contribution can be expected by applying this method, especially for a small-n study. In the example Ragin (1987) uses to show the potential of his method, it is possible to see how combinations of circumstances work together to give one final result. In this way, it is possible to decide if variables are necessary or sufficient to achieve a certain outcome. He shows that it is even possible that sometimes the absence and sometimes the presence of a characteristic is needed to reach the final result, making different ways of logic possible (ibid.).

However, as stated above, the unit costs in LPT depend on a large set of influencing variables outside the organisational setup if one wanted to compare efficiency levels, such as congestion, route selection, town structure, demand, fuel prices, amount of night and weekend services, proximity to a depot facility, and salary level. Consequently, an analysis of variation would be highly speculative with the number of explanatory variables exceeding the number of cases. Therefore, this study refrains from quantitative comparisons and remains purely qualitative across the cases, and only developments within the cases are analysed with the explanation of numbers.

Summary of the methodological approach and overview of the research questions

RQ: How does the quasi-market "solution" in LPT create new inefficiencies, from the perspective of NIE?

RQ1 How is the quasi-market perceived from the institutional perspective?

RQ2 How are the inefficiencies experienced in practice?

RQ3 How does the institutional setting influence the observed inefficiencies?

Research area: Local public transportation, public management reforms

Theoretical models used: New institutional economics, quasi-markets

Methodology: Qualitative case study comparison, six cities in two countries

Data collection: Interviews with key actors, secondary literature, journals, newspapers

Data analysis: Content analysis, comparison

4. Regulatory framework and administrative background in the context of LPT

The legal framework has three levels of influence: European, national, and regional/local. The influence by EU legislation is strategic and presented in Chapter 4.1.; the national legislation is more detailed and has executive character, as described in Chapter 4.2. Particular regional and local aspects are described within the cases in Chapter 5. The EU legal background was due to change in 2009, which was within the timeframe of this study. These changes had an impact on national legislation, which took additional years to be implemented. For that reason, the situation can be regarded as transitional. Many of the changes are connected to the choices that can be made by the city administration. The regulations became much more specific and detailed than before when the old EEC 1893/91 is compared with the new EEC 1370/2007.

4.1 European Regulations

Germany has been part of the EU since the beginning and Finland joined in 1995; regulations on the EU level therefore affect both countries. The EU uses its legislative influence to enforce what it believes to be efficiency benefits at the local level. The economic foundation for EU policy is an efficiency gain through liberalization,[6] which is a result of the so-called Lisbon Process (Ardy 2011).[8] It seeks to open markets that have been previously closed, like telecommunication, electricity, or public transportation. Elementary rules, as formulated in the articles concerning

[6] Compare to http://ec.europa.eu/competition/liberalisation/overview_en.html

[8] It is important to keep in mind that the Lisbon process is a policy and not the result of an economic research.

subsidies and competition, apply to all sectors, but additionally, there are decrees that are designed for one specific sector only. They intervene in the market structure of several sectors throughout their member states, such as energy and telecommunication and transport. These sectors have all been monopolies in many countries and are pushing towards a market organisation of services. The EU has liberalised most of the monopoly markets. Liberalisation in this context means that markets have to be open for new competitors to enter, and barriers have to be abolished (ibid.). For example, in the case of Germany in LPT, de jure, anybody could enter a competition, while de facto, the market was a public economy monopoly. For this reason, the EU changed the legal framework to enable competitors de facto to enter the market (Ewers, 1999; Barth, 2000).

The EU has the power to set the framework in a way that it dominates domestic law. The main sphere of influence by the EU is through regulating the financing of subsidies. Financial regulations also restrict methods of organisation. For financing, there is a complex regulatory system for when subsidies are allowed and when they are not. The following sections analyse general rules and specific applications as an example for the public transportation sector, which regulate competition and subsidies.

In order to obtain a complete picture, first the legislation pre-December 3, 2009, is being introduced. It is particularly important to include this information since it explains the organisational structure of some of the existing cases. New laws have extensive grace periods over many years, and existing transportation-service contracts do not need to be changed. Since contracts easily extend beyond 10 years, old regulations influence existing cases into the future before they finally abide by new law. Relevant parts of the EU legislation concerning LPT are Articles (Art.) 73, 87, and 88, as well as Regulations (Reg.) EEC 1191/69 in the form of 1893/91. The latter regulation was replaced in December 2009 by EEC 1370/2007.

After a legal dispute,[10] the European central court formulated the following four preconditions to allow subsidies in LPT. According to Art. 73 (ex. Art. 77), the following is regulated:

- The company that benefits from the subvention has to perform the services.
- Parameters detailing the amount of money transferred to the company have to be defined and published before the competition starts.
- There must be no overcompensation for the service, which means that compensation can be as high as the emerging costs plus some "reasonable" surplus.
- The amount of money has to be based on an analysis of costs that would emerge in an average, well-conducted company.

Most of the LPT services require public financial support. Therefore, the EU regulations concerning the subsidies play a central role. The basic question for financing LPT is when and in which form support is allowed. There are two separate ways to support it: "subsidies" (see Art. 87 and 88) or "compensation" (see Art. 86 [2] and Art. 73).

Art. 88 (a grace period for existing violations) and Art. 87 are concerned with state financial aid and allow for state subsidies when there is a social public interest in the task and it is competition neutral, such as if every competitor were given the same subsidies when offering the services. Social public interest can be assumed as existing for LPT due to elementary mobilisation issues for young, elderly, and disabled people. Therefore, Art. 87 enables the giving of special support for social purposes, such as reduced ticket prices for these particular groups. The second condition is a bit trickier; how can it be guaranteed that all potential providers can have access to the subsidies?

Indeed, as a consequence of the subsidy regulation, public units were forced to be removed from the administrative structure, so cross-subsidising would be obvious (and then was forbidden). In order to give everyone a fair chance to obtain the subsidies, the condition for payments has to be transparent and according to objective criteria. Long-term practiced cross-subsidising, such as a low-cost energy

[10] Refers to the Altmark trans case, see below.

supply or money transfer from profitable public units, is forbidden nowadays (Barth, 2000).

Thus, state subsidies are allowed under the condition that there is a social interest, and every competitor is given the same chance to receive the money. Keep in mind that municipal aid is not actually touched (subsidiarity).

The second way to pay financial aid was regulated by the European Central Court when it ruled on the so-called Altmark-Trans case. The European Commission clarified the decision in the final version of KOM (2007) 725 in the context of Art. 86 (2) and Art. 73. It says that state aid is regarded as compensation (generally allowed) rather than subsidy (restricted according to Art. 87 and 88) if the following are true:

- The company that benefits from the subvention has to provide the services. This condition rules out subcontracting in supported services but allows the purchase of auxiliary services.
- Parameters defining the amount of money transferred to the company have to be defined and published beforehand and made public, forbidding secret bargaining between a monopolist and the subsidiser. It is mainly directed to public in-house production, where there has been unconditional support for the subsidies but also against incumbent private providers that make some kind of a deal with the public authorities.
- There must be no overcompensation for the service, which means that compensation can be as high as the emerging costs plus some "reasonable" surplus—a regulation directed at any kind of "rip-off" and monopoly-pricing.
- The amount of support has to be based on an analysis of costs that would emerge in an average, well-conducted company. This rule is directed against overpricing and challenges low-efficiency operators. However, it allows the benchmarking question to emerge. How is it possible to determine a good price for a certain service in a particular city?

In fact, those four criteria were introduced via a court decision, which threw back the EU commission in their attempt to control the financial support system. The rules by the EU were stricter than the court decision in the Altmark-Trans case. As a consequence, if those criteria set by the court were not fulfilled, the subsidies were declared as state support and would fall under the stricter regulations. Thus, there are decrees for that, such as 1191/69, 1893/91, and 1370/2007 for the

transportation sector (Brand, 2006; Wachinger, 2007; Wanner & Zietz, 2008; Beck, 2010; Wittig, 2010).

Differences are found between the compensation and the subsidy approaches. One decisive difference is connected to the amount of compensation (KOM 2007, 725), and another is competition neutrality. The court ruled that the compensation is can be open, transparent, or non-discriminating through competition or it is set by the authorities by comparing the costs of an average, well-managed company (without competition). There need be no direct comparison between the subsidised company and a competitor. As a consequence, it is still possible to have a direct contract without competition; however, it is difficult to "compare" the indicators for subsidies. At the same time, the target is not to restrict the organisation of the service but simply to obtain an overview of the system (ibid.).

The intention to prevent closed markets, which are kept alive by subsidies, becomes clearly apparent. Since most of the services are subsidised, this condition has a deep and widespread impact on an organisation at the local level. The question is therefore how subsidies may be directed to transport providers. To this end, the European Central Court formulated the following preconditions. According to Art. 73 (ex. Art.77), a purchaser is allowed to pay subsidies for coordinating transportation or the provision of public services. Using the coordination subsidies, national subsidies were given to the regional transportation bodies (Verkehrsverbuende). However, it is possible to view LPT as a basic, public service making use of Art. 73.

Decree 1893/91: The Local Public Transportation Act valid before December 2009

Moving on to the decrees, the most significant for LPT is Reg. EEC 1191/69, which is based on the old Art. 87 and deals specifically with the situation in the transport sector. It was changed in 1991 and therefore is often listed as EC 1893/91 and explicitly tailored to LPT. LPT is defined as a transport service that operates within a city or metropolitan area or to and from the city and its hinterland (2). It declares that member states may exempt companies only operating in LPT from the decree (1). As a consequence of this rule, many cities that had a public utility company split their transport service into sectors. See also the case study section in Chapter 5.

The next part says that all obligations are taken from public services (3). What this means in connection with (1) is that member states are actually allowed to oblige public services in LPT. For this purpose, authorities may initiate contracts with

transportation companies (4). This can include special tariffs, according to Art 87, or the obligation to run services.

Furthermore, Reg. EC 1893/91 defines that if a company operates beyond this closely specified sector, the part providing LPT has to be separated. It has to have separate accounting departments; money transfer among the parts of one company, such as public utility companies, is forbidden (5). These so-called cross-subsidies have been used previously in order to circumvent an EU rule that demanded competition in case services were not profitable. There follows a detailed description about what the contract between public authority and the transportation company can include, according to Reg. EC 1893/91 (4). In combination with article Art. 14, it regulates the following:

Transportation services have to be sufficient in continuity, regularity, capacity, and quality. This means that transportation services can be defined as having, for example, three buses per hour, a frequency of every 15 minutes, minimum service times from 6 h to 23 h, a minimum size of buses, a maximum age of the bus fleet, special facilities for the disabled, and more for the following situations:

- Additional transportation services, such as for events or school buses.
- In accordance with special tariffs and conditions for some groups of people, which would again be for pupils, the elderly, or the disabled.
- Adjustment to the de facto demand. That is, when a demand is estimated, the company has to send more buses or bigger ones to fulfil the purpose. The company could be interested in obtaining the passenger revenue on the cost of lower-than-expected quality. On the other hand, if the demand is lower, the company could continue a senseless service on the cost of public subsidies.
- The price for the service is by obligation from public authorities or according to contract.
- According to the duration of the contract.
- In response to fines in case of violation of the contract.
- According to infrastructure that can be used by the transportation company.

Further details, which are not that important for the moment, are as follows:

Regular services offered without subsidies can only be changed when the public authorities are informed about it at least three months in advance. Then, the authorities can demand a continuation of the service for a maximum of another 12 months. The transportation company can then ask for compensation for the service according to existing rules.

EU-regulation 1370/2007, valid since December 2009

This decree replaced 1893/91 and reacted to the court decision of the Altmark case and the input by the European commission. Concerning organisation models, regulations for access to the market have basically been unchanged. The transport operators are possibly awarded an exclusive right, which has to be acquired through authorisation. The market entry procedure takes the form of competition in the market. There are two different ways in which an authorisation may be obtained (Wanner & Zietz, 2008):

If the operation qualifies as a service concession, then the rules for public service obligations apply:

- A direct award is explicitly allowed in specific cases (self-provision, internal operator, or small contracts).
- There are basic rules for competitive tendering.

If the operation is not qualified as a service concession then:

- Self-provision is allowed.
- A direct award to the "in-house" operator is an exception (extensive jurisprudence).
- There are elaborated rules and jurisprudence for competitive tendering (open, restricted or negotiated procedure; competitive dialogue).

Art. 3 relates to public-service procurement, in case the service is directed to public entities (1) in a non-profit environment. Exempt from that, obligations to impose maximum fares for specific or all groups can be subject to general regulations. Public authorities thus need to avoid overcompensation (2). The possibility to decide maximum fares for pupils, students, and people with limited mobility can be taken as an exception from this regulation, ignoring Art. 73, 86, 87, and 88 of the EU treaty. This decision is made on the state level.

Art. 4 determines the content of the public contracts and general regulations. Part 1 regulates that the obligations and the area have to be defined clearly (1a), and parameters for compensation have to be transparent and "objective". Again we find emphasis that overcompensation is not desired. Compensations are limited to the net effect of compulsory service regarding income and expenses plus a reasonable

profit (1b). Further regulations fix the calculation for expenses such as personnel, infrastructure, energy, buses, installations plus fixed costs, and a reasonable profit (1c). In the next section (2), the handling of income through ticket selling is regulated; (3) sets a maximum contract period for 10 years and 15 years for rail services if they make up for over 50%. Section (4) gives ground to extend the contract by 50% if large investments have been connected to this service and need to be amortized. Another possibility to extend the contract by 50% is a special geographic distance situation. A longer contract can be awarded if there is a special economic reason AND if the contract has been awarded through competition. In this case, details about the reasons have to be reported to the commission. Part (5) explains that authorities can impose the obligation to a public operator to give rights to employees according to 2001/23/EC. Quality standards have to be included in the tendering procedure and contract as well if they are decided upon (6). The opportunities to subcontract services are fixed in part (7).

Art. 5 deals with the direct contracting of public services in connection with guidelines for public contracting in 2004/17/EC and 2004/18/EC. These guidelines exempt Art. 6. However, if there is the form of a concession, then Art. 6 is to be applied. In part (1), local authorities can decide to give the service to a unit they control or provide the service themselves depending on national law. In this case, the following point needs to be fulfilled. Part (2) details that public enterprises can operate only within their area of control. As an exception to that, section c) explains that public enterprises can compete in other areas up to two years before an intended tendering in their own area. If there is no corresponding local authority, a geographical entity is used. As stated in section e), public entities are not supposed to subcontract their services.

Part (3) of Art. 5 states that generally, services have to be tendered if external units are providing the service. That means that there can be no uncontested private monopoly (compare with Chapter 5.2.2, the Jyväskylä case). The process needs to be open, transparent, fair, and without discrimination, suggesting de facto a competitive tendering. Exceptions to that rule can be found in parts 4 to 6 and include services that are below a worth of 1,000,000 € or 300,000 pkm (passenger kilometers). This limit can be twice as high if small enterprises with a maximum of 23 vehicles altogether get the contract. Also, emergency cases are an exception when otherwise there would be no service at all. Those emergency cases are not allowed over two years.

Each compensation is subject to Art. 4. All direct services that have been organised in line with Art. 5, Ch. 2, 4, 5, or 6 (i.e., in the absence of competition)

underlie the regulations found in Appendix (1). These rules include the following: The compensation must not exceed the financial net effect of the service. This net effect is counted as follows: costs that emerged for the fulfilment of a public service contract or an obligation plus a reasonable surplus, minus positive financial effects from the network, such as synergy or income for the service (2). For the synergy effects of the network, all financial effects that are quantifiable are calculated to avoid under- or overcompensation (3). For public units, there need to be separate accounts for each entity in order to avoid cross-subsidising. Costs and income must be strictly separated (5). A reasonable surplus is an average rent that takes the entrepreneurial risk into account (6). In case there is a public provider, there must also be an incentive to retain or develop an objectively assessable and efficient management, and all the incentives should offer a sufficient quality of service.

Art. 8 gives the members 10 years to apply the new regulations. All previously granted contracts remain in effect. All agreements up to 30 years' duration will remain valid but only for the next 10 years if not tendered. Public arrangements remain valid if a termination causes legal or economic problems. (4) Public enterprises that operate more than 50% of their services on profit or enjoy exclusive rights can be excluded from competition. In that case, all public providers that fall under those criteria have to be excluded.

Art. 9 regulates further that it is according to the regulations to support infrastructure costs, research and development. This regulation permits in particular direct awarding of services both to public and private companies, given that the business does not exceed a certain size and that the company does not operate outside the administrative boundaries of its origin. This freedom is according to the subsidiary principle, which found emphasis throughout the process. Hence, cities and regions may decide to provide public passenger transport services for themselves.
(http://www.europarl.europa.eu/parliament/expert/displayFtu.do?id=74&ftuId=FTU_4.6.2.html&language=en).

Summarising the new act, it is still possible to have an uncontested public monopoly if the operator does not compete anywhere else (Art. 5). It is possible to have a private monopoly if the number of services is marginal. The strongly preferred model is competitive tendering. There are strict regulations regarding the subsidies. De facto, most of the lines receive subsidies, so they fall under the restrictions for granting subsidies. The municipality is restricted in the amount of support and the mode to pay for the services but not in the way to organise the

LPT—with the exception that private monopolies via direct procurement are permitted only on a marginal level.

Together with the regulation comes an explanation, which specifies and interprets the regulation. The introductory text to the new decree is extensive, since the legislator anticipated a possible dispute. The pretext is not legally binding but clarifies the regulator's intent and the spirit of the law. The most-relevant points are listed below:

First, it is interesting to notice that in (5), the legislation speaks about commercial/economic interests and therefore ignores the existence of other reasons to provide public transportation, such as elemental rights to mobility, social aspects, etc. One method to secure the service is to grant exclusive rights to a public provider and to possibly compensate for deficits. It is possible on the national level to make exceptions to the application of the regulations; in that case, basic regulations for state subsidies should be applied (those which are stricter).

One outstanding point is that a legal text claims economic efficiency gains through regulated competition (7). On this basis, the so-called Lisbon Process worked, which opened the door for competition in the transportation sector.

Paragraph (9) outlined the necessity of clearly defined contracts, which include service and compensation definitions. There is also a contradiction. On the one hand, the authorities shall be able to choose freely; on the other hand, competitions shall be treated equally and proportionally.

There is an emphasis that it legally makes no difference if the provision is done by the public or private sector. The regulations are based on Art. 16 of the EU treaty (i.e., free organisation of services concerning common economic interest), Art. 5 according to the basics of subsidiarity and proportionality and, finally, Art. 295 concerning property aspects.

According to (15), contracts shall be limited in time because otherwise the benefits of competition will be erased. It is suggested to extend the contract by half of the duration in case the customers are satisfied with the service. There should also be exceptions when the public provider makes large investments (this is the case, for example, with light rail, subways).

Number (16) is concerned about the employees, so it should be possible to transfer their demands from one provider to the other, according to 2001/23/EC, and also extend these. This includes generally valid contracts as much as social standards.

Number (17) emphasizes the subsidiarity so that local authorities may set standards in contracts. It also refers to securing social norms and the social dumping problem.

In Number (18), local authorities are allowed (if national regulations permit) to provide services themselves or to ask an internal provider to run the service without competition. In case there is an internal provider, this unit shall not be allowed to expand its services to other areas. It can even be forbidden to enter competition within the area if the authorities demand it.[12]

Here, Numbers 19 through 34 shall be briefly summarized. Number (19) speaks about subcontracting, which shall also be allowed for public entities. Number (21) mentions the guidelines for coordination of transportation (2004/17/EC) and the guidelines about giving contracts in construction and service delivery (2004/18/EC). With Number (22), it is possible to negotiate details even after the submissions. In Number (23), splitting services in order to avoid competition is not allowed. Number (27) again emphasises that it shall not be possible to overcompensate for unprofitable services. In case there is no competition, the measurements for subsidies shall be visible and show how efficiency and quality are being secured. In Number (30), transparency shall be improved. Number (33) involves regulations about subsidies according to the Altmark Trans decision. Compensations are not subsidies, according to Art. 87, if four preconditions are fulfilled. If not, then it can be legal—according to Art. 87, paragraph 1—and if regulations as stated in Art. 73, 86, 87, and 88 apply. In Number (34), other compensations can be paid according to Art. 73, which means that there should be no overcompensation but what is lacking from income in order to provide the service.

[12] This sounds odd; If the authorities have enough control over the unit, they should be able to influence the decision without needing legal support.

4.2 National level

4.2.1 Germany

The most important regulations concerning LPT can be found in PBefG (Personenbeförderungsgesetz, Act for Transportation of Persons) and for financing the RegG (Regionalisierungsgesetz, Regionalisation Act) and GVFG (Gemeindeverkehrsfinanzierungsgesetz, Municipal Traffic Financing Act).

There was a change in the German legislation in 1993 in reaction to Reg. EC 1893/91. An important detail is a distinction in profitable and non-profitable services (depending on subsidies) that have been treated separately in the past. Profitable services had no obligation to be exposed to competition, while it was mandatory to tender non-profitable services. The interesting thing about the definition is that the calculation for what is profitable was made by revenues, plus compensations for special obligations like reduced fares, plus cross subsidies such as reduced energy prices, plus financial support obligations to pay off deficits. By this calculation, any service was making a profit and did not require "subsidies" but instead "compensations" and "levelling of deficit" financial obligations. That meant the German market has been de facto inaccessible for competitors because profitable business could be provided without competition. Public companies were transferring money from one sector (e.g., energy) to another (e.g., transport) and were therefore able to offer their services for a price that never could be matched by the private sector. This practice was called "Querverbund" and was widespread in Germany. It does not work anymore for two reasons: First, the revenues from monopoles like energy were much lower after the liberalisation of these markets, and second, this cross-financing is now forbidden by the EU. After the grace period of some years (see Art. 88), German authorities started to challenge EU legislation and made an appeal, which had to be judged finally by the European Court. These legal proceedings influenced the new legislation on the European level. Consequently, the section of the transportation law § 13 PBefG has been cancelled from the books, but according to §68 PBefG, new contracts based on the old regulations could be made until December 2013 (cf. Barth, 2000).

Market initiative is the first choice for commercial services. If several operators apply for the same transport service through their own initiative, an authorisation competition will take place. The operator with the best application will then be awarded the authorisation (§ 13 PBefG). In relation to the local public transportation plan, the local authority can influence the decision. The transport operators are awarded an exclusive right, which has to be acquired through authorisation. The market entry procedure takes the form of competition for the market. There are two different ways in which an authorisation may be obtained.

For the second possibility, there is an authority initiative for non-commercial services. If no service provision consistent with the public interest arises out of the competition, the authority can initiate the competition for a public-service contract. The procedure falls within the scope of the procurement legislation based on the utilities directive (Dir 92/50/EEC). For this purpose, the competent authority defines the desired service provision (including quality standards, fare level, competence, and risk allocation). Subsequently, it carries out a competitive tendering procedure. The bidder with the most economically advantageous offer will be awarded the public-service contract. The authority issuing the authorisation controls the tendering procedure in terms of non-discrimination and awards an authorisation (§ 13a PBefG) to the operator. This passage §13a PBefG has been cancelled.

Whenever possible, priority is given to the market initiative. Therefore, the tendering procedure must be revoked in case an operator applies for the authorisation without any requirement for public financing. In this case, market access follows the rules of the competition for authorisations. One important fact is that §13 (3) PBefG still regulates whether a company has satisfied the public needs in the past. This means nothing else other than an advantage for incumbent operators.

Financing

The reform sketched above did not include a complete reform of the financing instruments for public transport; in fact, the main regulations for services that still enjoy subsidies according to the new regulations have been unchanged.

For non-commercial (subsidied) bus services, the instruments according to the rules of Reg. (EEC) Nr. 1191/69 became mandatory. However, the compensation for fare reductions for school pupils, students, and the handicapped has not changed. In fact, there is no need for change because the bus services follow the rules of valid

EU regulations. For the disabled, the municipalities are responsible, so they will pay their share of this. The "land" (county or federal state) is responsible for education, so they pay for the pupils and students.

In this area, the structure of the payments to the operators has not changed very much. None of the traditional pathways of public funding have been given up, with one major change. Until the 1990s, a large portion of the money to run the services came from monopoly profits; a lot of the money later came from the "Regionalising Fund," which was meant for the regional heavy-rail transport but in fact was mainly used for LPT. The amount of money is as much as 12 billion DM, which is 6 billion € (Werner 1998). With the change of funding, there was a change in organisations as well. There is also the Regionalisierungsgesetz (RegG), which explicitly covers LPT with a defined maximum of 50 km or 1 hour of transportation distance. However, it includes rail traffic. The second renewal of this law from 2007 defines that in the year 2008, 6,675 bill. Euros were dedicated to this law, payable to the federal states (Länder) according to a given distribution key. The subsidies have been raised by 1.5% per annum since 2009. The source for this money is the federal tax on fuel. At this moment, price reductions for students are subsidized by the state (§45 PeBefG). The state also sets up grants for investments, such as buying buses, according to §2(6) GVFG. The GVFG (Gemeindeverkehrsfinanzierungsgesetz) regulates state support for municipalities. Since 2007, 1,335 bill. Euros have been given by the state to the Länder. These grants are earmarked for general infrastructure improvements in a municipality. Article § 2 explains that the Länder can support local investments for a number of investive measurements, including local public bus transportation. For example, it names depots, maintenance and repair shops, bus stops, information systems, and signal processing. It also covers the purchase of buses if they are used, according to §42 PBefG, on regular buslines.

The usual way to count the balance—until today—has been to include all subsidies and even permanent payments from profitable sections of the city's economy, such as energy or the water supply. This cross-financing has ensured the making of public transport "profitable" and has always been an object of criticism. Cross-financing has become the main instrument to prevent market entry by private operators. Some also claim that it is incorrect to take any subsidies at all into account, and as a result of this, none of the local transport services would be profitable.

Organisation of LPT according to the German legislation

There are several institutions mentioned in the transportation law: the public authority, which is responsible for the authorizations (concessions), the responsible authority for carrying out the task and, finally, the operator. These organisations are supposed to work together and to coordinate lines, timetables, and fares (§8PBefG). The task authority "Aufgabenträger" is decided by state law.

Following the alterations in the laws, the new planning and contracting responsibilities in public transport were assigned to competent authorities. For this purpose, most of them have created new bodies or administrative divisions as follows:

The federal states ("Länder") being competent authorities for rail-passenger services have established rail transport planning agencies and have entrusted these entities with planning and with the award of public service contracts.

As mentioned above, an important law for the LPT context is the so-called Regionalisation Act. It involves all public transportation within one hour of travel time, including trains. The municipalities of a region form a task-responsible authority "Zweckverband," which acts as a purchaser and plans the service. The federal states, where the competence for planning and contracting rail-passenger services has been allocated at the city and district levels, have formed Zweckverbände (unions of public transport authorities) or common-transport-planning associations (Verkehrsverbund). Sometimes, these unions exceed the borders of the federal states and include up to four states, such as the one in the Rhein-Neckar area VRN. In order to avoid unnecessary complications, in this study, only cases where the corresponding planning association is exclusively within one federal state were chosen.

These planning authorities have been awarded the competence for regional bus (and rail) services. As a reflection of the new legal situation requiring the award of public-service contracts, most of the existing transport associations that were subsidiaries of the operators have been transformed into authority-owned transport planning and contracting agencies (e.g., Hamburg, Frankfurt, Munich). That means planning and responsibility are in one place.

In the federal state of Hessen, which is connected to the Frankfurt case, most of the competent authorities for local transport services have formed Lokale Nahverkehrsgesellschaften (local transport planning and contracting agencies) co-

operating with the respective Verkehrsverbund, being responsible for regional bus and heavy rail services in their respective area. The competent authorities, which are only responsible for bus services in peripheral and rural regions, have mostly entrusted an administrative division. Hessen is a special case for the state and declared to apply 1893/91 strictly and tender all services.

Change has occurred in relation to the markets for bus services. Existing private and public operators are preparing themselves for the forthcoming competition to a greater degree. A uniform move forward is not apparent.

Amongst other forms of re-structuring into integrated operators (e.g., Berlin, Hamburg, Bonn), the sale (e.g., Bad Kreuznach, Zweibrücken, Görlitz) or partial sale (e.g., Leipzig) of various forms of cooperation (e.g., further joint ventures of several local transport operators with the group Taeter), further joint ventures of private-transport operators, and expansion attempts (e.g., positioning of DB AG as a "European player" in the competition for the municipal transport operators) are being observed and prepared.

4.2.2 Finland

A significant change in the Finnish legislation occurred in 1991 with the Public Transport Act and Decree 343/1991, which gave local public authorities new choices. The decree included a possibility to move to competitive tendering in acquiring public bus-transport services, which was not possible under the previous act. Other new features of the act were, among others, the recognition of different types of services; provisions concerning the planning of services, including the need to take the land-use issues into consideration; and provisions concerning the state's financial support for lowering the fare level on public transport. A possibility of tendering was warmly welcomed by some authorities, but other authorities buying contracted services were hesitant. Transport services by rail (trains, trams, and the metro) remained under public management.

The Public Transport Act and Decree were amended in 1994 to meet the requirements of the EU legislation. Access to the market was liberalised by stating that anyone of solid financial standing, good repute, and professional competence (requiring a specific public-transport qualification course approved by the Ministry of Transport and Communications) could offer contracted (tendered) public-transport services anywhere in Finland. An important feature of the act affecting

contracted transport was to abolish the authorisations for contracted transport. The production of non-subsidised public transport services still required an authorisation from the public-transportation authority. Furthermore, the new law included the termination of the obligation to operate non-profitable services.

As a result of adapting the new legislation, Helsinki and Turku divided their transport authorities into two parts: operator functions and authority. Espoo and Vantaa both sold their bus companies in this context to international operators. The main tool used when regional planning authority YTV opened the market was political decision-making. Later on in Turku, the Finnish Competition Board forced the city to open the market for competition. The main barriers for transition were, in the first place, incumbent operators, who were afraid of losing market shares and losing profits and were supported by local politicians. The authorities in the Helsinki region faced slight chances in upcoming years. Already, the city of Vantaa had ”outsourced” its tendering functions so that YTV was in charge of them. The same types of discussions were taking place in the City of Espoo, but no decisions have been made so far (Lahdenranta 2000).

The question of whether to introduce competition or not was a topical issue in the public transport branch, especially in the big cities, after the new public transport law had come into force in 1991. It should be emphasised that extensive tendering was possible only in the regional and local bus transport in the Helsinki region and in the City of Turku. Apart from that, only small-scale tendering was possible in cases where bus operators had abandoned an authorisation to operate non-profitable services. Authorities regard the tendering process in Helsinki as successful, and the cost level dropped considerably by up to 33% in connection with an unchanged service-quality level (Sinisalo, 2007). On the other hand, there was a problem when an operator losing a competition had to dissolve contacts with employees leading to strikes in Helsinki, for example. Another problem has been the lack of employees (i.e., bus drivers) at some point. Apparently, the working conditions have not been attractive for the personnel (Haatainen, 2003).

At the moment, there are mainly three types of organisational forms. In the Helsinki region and Turku, for example, transport services are in the hands of the public transport authority, with both public and private actors having a contract with the authorities. Tampere is a special case because it has defended itself against competition until today. Nevertheless, some years ago, Tampere sold a small company to Connex (TMP0). In many smaller cities, the service is based on market initiative, and providers are solely private-owned, except for the city of Pori (Rosenberg, 2005).

Basically, the organisational forms in large cities have already reached their new, stable situation for a tendered market so experiences can be drawn from it. The general strategy of the authorities is also to use tendering in the future. For a brief overview, in the Helsinki region, the cities and the regional body YTV, as well as the city of Turku, have the responsibility of planning the routes and timetables, developing the public-transport system, and acquiring the public-transport services by tendering. The rail transport is thus far produced as public management (Helsinki tram and metro) or by a direct contract (commuter trains in the Helsinki region). In Tampere, the majority of bus services are produced as public management, but plans for more tendering do exist. In the middle-sized cities, the private operators have the initiative and full responsibility of the services by authorisation (Rosenberg, 2005).

As a consequence of the new European law, a new law on public transportation (Law 869/2009)[14] was also passed in Finland. It is very detailed and comprises nine chapters and 62 paragraphs. The most important regulations follow as a summary. After the transition period, the traditional form of exclusive operating permits for particular schedules and routes in bus transportation will no longer be possible. In practice, this means that the many Finnish cities, which happen to be operated by a private monopolist, will have to shift their organisation model by the year 2019 towards either competitive tendering or establishing their own company. It will be interesting to see how much actual competition there will be in the remote, small cities by international comparison.

§12 of the act defines transportation authorities, all of which are now spreading beyond the city boundaries. This idea is similar to the Helsinki model, which has incorporated regional planning since the early 1990s. Apparently, the model is successful enough to be regarded worthy of copying.

§4 of the act defines the responsibilities between the authorities and the operator. One interesting point is that it allows the operator to take over the planning. Consequently, it may potentially become difficult to compare tendering applications.

§14 allows for the purchase of services to ensure a certain quantity and quality and the keeping of low prices for the users, as market conditions allow.

§27ff is directed to a market initiative. Traditionally, lots of Finnish local transportation was based on initiation by the market (i.e., private operators); therefore, this mode of entering the sector is important. It is also in line with the spirit of the EU legislation (see above). An operator with a license basically only needs to inform the transportation authorities about starting the service.

[14] http://www.finlex.fi/fi/laki/ajantasa/2009/20090869#L1P4

§30 is about the duration of permits and contracts. If the permit is based on a fixed schedule (Reittiliikennelupa), the maximum contract is 10 years or else (Kutsuliikennelupa) 5 years.

§41 gives the purchaser the distinct opportunity to choose the cheapest entry in the competition. The law is economically advantageous and provides a number of criteria, including quality, which could make the difference. The law also allows, according to §42, the ordering of a certain number of extra services from a provider without a new tendering, after the contract has been signed. This option opens the contracts to some flexibility to cover dynamics in demand and planning mistakes.

In a brief comparison of the two national settings, the common framework based on EU regulations dominates. However, there are a few differences worth mentioning. Regional authorities in Germany are allowed to dictate the form of organisation, such as in the Hessen state. In Finland, there is no additional restriction for the municipalities, which would reduce the freedom to decide. Also, when it comes to setting fares or a ticketing system, a Finnish city is independent from outside influence and restricted only by its own willingness to spend resources on LPT. However, the tradition of market-initiated services, despite being heavily subsidised, has led to many private monopolies to this day. Thus, it is often the private operator who has significant influence on such services. In Germany, a unanimous tendency was notable towards public monopolies, so cities have de facto a high influence through ownership. Both systems have changed in the last few years under EU rule. Another aspect is regional cooperation, which is new in Finland outside the Helsinki region, so city boundaries are more important for all actors. For example, at this point, public operators are not working beyond the city borders. However, structures are changing in this context in Finland and getting closer to the model used in Germany with regionally integrated planning and operating.

4.3 Case study introduction

Having discussed the European and the national background, the local level is next considered. In this part comes a brief introduction of the case cities with some basic data and an illustration of the transportation network and the cities' locations to give the reader an idea of the characteristics of the case cities. The cities are presented first by country, then by organisation structure. Using the classification in Chapter 5, the cases are shown in the same order in which they appear in the case-study section.

Wuppertal

Wuppertal is a German city near the Ruhr agglomeration with about 350,000 inhabitants. Since there are also services across the city boundaries, the number of inhabitants within the transportation area is over 433,000. In 2012,[16] 64.5 million passengers travelled 15 million passenger kilometres with 290 buses, providing 1,232 million seat km in a network that extends to 626.9 km. Apart from the bus network, the city is known for its unique century-old skyrail. The city is part of the Verkehrsverbund Rhein-Ruhr (VRR) regional transportation network, which restricts the city in its freedom to decide about transportation issues. Wuppertal maintains its public provider, which allows it to operate in a protected monopoly. Wuppertal is presented in Chapter 5.1.1

Tampere

The Finnish city Tampere is situated about 200 km north of the capital with about 217,000 inhabitants within its boundaries (2013), and it is served mainly by the public operator Tampereen Kaupunki Liikennelaitos (TKL). In 2008, TKL ran 25.6 million trips and 11.3 million vehicle km, of which 10.5 million were on regular lines with

[16] WSW Business Report 2012: http://.wsw-online.de/unternehmen/Download/Geschaeftsberichte/WSW_GB_2012.pdf

156 vehicles altogether.[18] Tampere has been chosen for its public monopoly solution. It has been unique in pursuing this approach in Finland where private monopolies dominate. Gradually, Tampere started to apply the first steps in competitive tendering after 2008; however, the market share of the protected public operator is over 80%. The data collection proves the structural dominance of the public monopoly. Tampere is presented in Chapter 5.1.2.

Pforzheim

Pforzheim is a city in Baden-Württemberg in southern Germany and is home to about 120,000 inhabitants; 19.7 million passengers used the local bus system in the year 2013. The company has 250 employees and runs 76 buses that provided 4.7 million vehicle kilometres, totalling 242 million passenger kilometres.[20] The city plays the lead role in the regional transportation network Verkehrsverbund Pforzheim Enzkreis (VPE). It is the biggest German city to have outsourced its bus transportation to a joint venture with Veolia that began in 2007. The case has been selected to represent a private monopoly, despite the city still holding a minority share and therefore not losing complete control over the operator. Still, the dominance of the private operator justifies the choice. The Pforzheim case is shown in Chapter 5.2.1.

Jyväskylä

Like many Finnish towns, Jyväskylä in central Finland includes a large rural area in its city boundaries. Officially, it reports 133,000 inhabitants; however, within the relevant public transportation network, the number of people is around 70,000. Nonetheless, it is the largest town in Finland that is completely operated by one private monopolist. The bus transportation network has a total volume of 77 buses. In 2009, the bus transportation provided 5.22 million km, of which 73% fell within the city boundaries. A total of 6.1 million trips have been taken.[22] Jyväskylän Liikenne, which is part of the Koiviston Auto Company, has provided the local

[18] Data from http://www.tampere.fi/tkl/julkaisut.html

[20] cdn.pf.webseiten.cc/fileadmin/user_upload/buerger/haushalt/beteiligungsbericht_2012.pdf

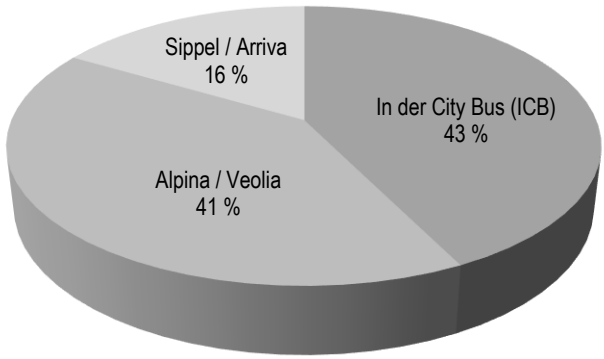
[22] Figures from http://www.jyvaskyla.fi/kadut/joukkoliikenne/organisointi

transportation for a number of decades, which makes it the largest city operating in a private monopoly. Jyväskylä is presented in Chapter 5.2.2.

Frankfurt

Frankfurt in central Germany has a population of 700,000 people within the city boundaries, with the urban agglomeration accounting for over 1.5 million people. In 2012, 63 local buslines extended to a network of 567,000 km; 278 vehicles accounted for 16.7 million vehicle kilometers, where 53.3 million passengers travelled 196.8 million passenger km.[24] Frankfurt plays the lead role in the regional planning association Verkehrsverbund Rhein-Main (VRM). The state of Hesse commanded the municipalities to put local bus transportation services to competitive tendering, and Frankfurt complied beginning in 2003 after previously having had a public monopoly regime. The market is restricted to three companies. Public operator ICB (In der City Bus) won auctions as well as the private Veolia and Arriva, which both bought local operators. Fig. 5 shows the market share in Frankfurt. The Frankfurt case is shown in Chapter 5.3.1.

Fig. 6: Market share of daytime bus services in Frankfurt 6/2013, excluding the minibus lines[26]



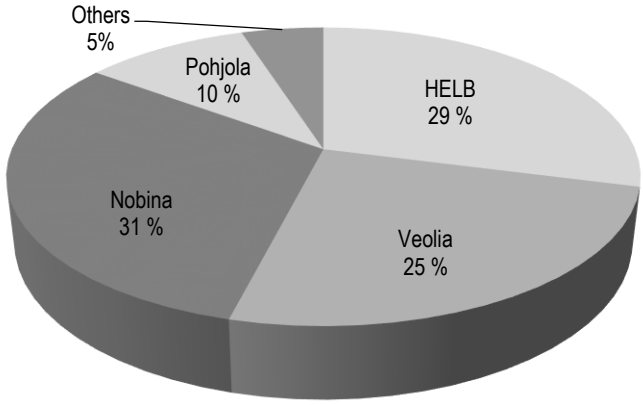
[24] http://www.TraffiQ.de/fm/20/TraffiQ_Kurzprofil%202012.pdf

[26] Calculation based on TraffiQ press releases from 13.10.08, 19.2.10, 26.11.10, 9.12.11 and www.busfacts.de

Helsinki

Helsinki, the capital of Finland, is home to 605,000 inhabitants. Regarding public transportation, ties with the neighbouring cities Espoo (with 260,000 inhabitants) and Vantaa (with 200,000 inhabitants) led to a joint planning of the so-called capital region. Hence, Helsinki Regional Transport (HRT) serves over 1.1 million people in the entire urban area and is the only coordinating structure of its type in Finland. As the annual report for 2012 states, 1345 buses have transported 176.7 million passengers in the metropolitan region.[27] In 1993, Helsinki chose to open up bus transport to competition, with both public and private providers winning. The biggest operators are public HELB and the two private companies Nobina and Veolia. The Helsinki case is shown in Chapter 5.3.2.

Fig. 7: Market share of bus services in the Helsinki Region 7/2013 [29]



[27] https://www.**hsl**.fi/sites/default/files/uploads/**hsl**_vuosikertomus2012.pdf

[29] Calculation based on email from Helsinki Regional Transport public relations Tuija Ruoho, 23.7.13

5. Case studies

5.1 Public monopolies

5.1.1 Wuppertal

Introduction

The city had one integrated public utility company, Wuppertaler Stadtwerke (WSW) until the year 2006. A part of its share was owned by the private energy company RWE. However, due to legal changes, it was not allowed to direct award contracts when the operator was not entirely public. As a result, the public transport was separated from the structure and made into an independent unit that is fully and publicly owned by WSW Mobil. The organisational scheme is entirely a reaction to legal requirements (WUP1).

The city utility works operated as a limited company but now is a holding with separate sectors. The company has been split with the transportation unit called WSW Mobil under it but is retaining the actual tasks that it previously had. The change of structure has had no effect on the way the city exercises influence on transportation, and WSW Mobil is not more independent as a unit than before, despite being legally independent. Changes in a purchaser-provider split were on paper only, while personnel and power structures remained largely unchanged (WUP1).

Since the legal framework in the 1990s until 2009 was uncertain concerning possible compulsory competition, the operator's management was preparing for potential competition and cut costs rigidly in order to offer competitive prices. Currently, there is no pressure by the city to change the LPT organisation through competition or outsourcing. The city's expectations regarding efficiency are met, also due to reduced expectations by the politicians. Among other major reforms, the preparation process resulted in cooperating with small private companies Elba and

Klingenfuss for outsourcing and renting personnel. Beyond that, there is no movement towards outsourcing or competition (WUP1).

The city imposes a service obligation on its own unit and exercises its influence through this contract. For the purchaser, it is a good thing that influence on the service has increased. This means that WSW Mobil is now under more control of the city than before. Efficiency is ensured by the contract, where the EU rules request that the costs must not exceed those of an average company. On top of that, the subsidies are reduced every year. Efficiency gains are not supported by any incentive mechanism, since fiscal restrictions forbid that (WUP2).

One particularity of the local transportation network is the so-called "Schwebebahn," a unique suspension monorail installation on poles, which is operated by the city as well. It has its own budget and management and is not discussed further here. However, its yearly operating deficit has a negative impact on Wuppertal's budget (WUP1).

Actors

Reforming the public utility unit WSW

On a broader scale, major changes happened to Wuppertal's public management, following a new philosophy in the beginning of the 1990s with the formation of independent public-service enterprises. On the economic side, cost pressure has been a permanent issue for decades because of extensive overall fiscal deficits. Politicians in particular had high expectations concerning cost-reduction from the utility unit. For public transportation, a detailed cost assessment and a comparative benchmark study resulted in major restructuring starting in 1998. The city's expectations regarding efficiency were met after the reforms but also were due to reduced expectations by the politicians. At the moment, there is no further pressure by the city to change the LPT organisation through competition or outsourcing (WUP1).

The (previous) manager of the Wuppertal operator gives a catchy description:

> The city had to learn in the last 20 years, that municipal enterprises are no self-service shop and that there needs to be an entrepreneurial management in the enterprise. The management has to combine targets of the cities within the set environment. Things have to be clearly regulated and the management has to

make the best of it for the city and the people. The regulation is also important for the politics, because they try not to have clear targets. (WUP1)

One premise was to secure financial cross subsidies. A city can avoid taxes by putting several city-owned companies on one bill. They would calculate a certain stable profit margin by the energy unit, which would then subsidise the public transportation unit. However, this practice loses significance in Wuppertal, since the profit of the local energy company diminished after the energy and gas market were liberalized (WUP1).

Cost reductions and rising pressure have been a permanent issue for LPT. The result of a benchmark study was a restructuring concept in which the workers union also agreed to give up privileges. The process started in 1998, and most things have been applied by now. Major changes have been made to the administration, which used to be a backup workplace for former drivers who are not able to do their jobs anymore. Also, the overhead in planning and marketing has been reduced, together with the depots. Another important issue has been the use and planning of personnel, which is now on the level of private companies. Additionally, Wuppertal was one of the first cities to outsource services and thereby to circumvent the trade-union agreement. Permanent reduction in annual subsidies implies efficiency gain (WUP1).

Cutting costs occurs on many levels. For example, positions for former drivers disappeared in the administration because the drivers were not able to work in their profession any longer. Another position reduced overhead in planning, management, and marketing. Marketing channels were analysed for their efficiency and, consequently, service points were reduced from seven to only two. The infrastructure and also the depots were reduced as well. Cooperation and outsourcing were other ways to reduce costs. Permanent reduction in annual subsidies implies efficiency gain (WUP1).

The threat of competition for both legal and economic reasons created very high pressure for reform. One of the consequences was the founding of the service unit VSG with lower salaries. Improving efficiency has been the use and planning of personnel, which is now on the same level as private companies. For that purpose, a new public service sub-enterprise VSG (Verkehrs-Service GmbH) for managing drivers has been founded. Additionally, Wuppertal was one of the first cities to outsource services by entering into contracts with private enterprises. It circumvented the trade-union agreement, as the workers did not have a contract with

a public company anymore. On top of that, the workers' union agreed to give up privileges, so costs have been further reduced (WUP3).

Competitive pricing resulted in a three-level salary structure among the drivers. The highest income and benefit level goes to employees who have an old contract with the public operator WSW, followed by drivers from the public sub-enterprise VSG, which works as a holding for contracting drivers. Finally, the lowest income and benefits go to those under contract from previously private companies Elba and Klingenfuss, which have been bought by the city. VSG introduced a payment system similar to that used by these private companies. All these companies shall merge into one with one type of contract in the long run, which then would solve the inequality in salaries and benefit levels for the drivers. The question remains how much a future salary in the LPT sector there will be, as there is not yet a binding trade-union agreement. The restructuring effectively meant salary cuts, as one of the biggest factors to reduce production costs was found in salaries. The change is happening gradually with no layoffs, but retiring WSW employees are replaced by VSG drivers (WUP3).

For the company, it was important to introduce consciousness for expenses, which has been partly lacking and which the city was made aware of in the benchmarking process of 1998. Processes have been made transparent, and the operator started calculating how much of the income covers expenses. Sector managers then agreed on achieving targets within a certain time frame. With these targets, cost awareness has consequently risen (WUP1).

Reflecting on the transition, Hoffmann explains that attractiveness and customer service could be improved; in the beginning of the 1990s, there was strong political support to improve public transportation. The new network was introduced in 1994, which improved the connections. Also, in marketing and communication, things got better, so "we approach the customer and don't regard him as a case anymore," (WUP1) making the situation different from the 1960s and 1970s, when planning and organisation were more technical. Then, it was considered acceptable to do the job in the transportation sector, but employees did not really believe in it. There was more focus on safely and reliably operating the transport than on service comfort. Also at that time, the spirit was different because customers made fewer demands. The public-transportation sector had to learn that it depends on users and should care about service quality (WUP1).

There is no unanimity regarding whether the cities' influence on public transportation has increased or decreased after the reforms. From a city-planning point of view, there has been very little influence on transportation after the big

changes in the 1990s. This perspective should change with the new regional public transport plan, but the unit senses a lack of workforce (WUP2). Other informants believe the influence strengthened because of the financial restrictions, which limit the actual freedom of management.

There might be problems when politicians focus on short-term goals while management concentrates on long-term strategies. For example, throughout the years, politicians wanted to expand services in response to voters' requests. Those expectations in quality and quantity have been formulated, despite management's claims that they are unrealistic. Over the years, the politicians began to listen to management, and expectations became more realistic (WUP1).

According to the city officials, the key to a good-working relationship is information and trust. Information includes reasoning when making decisions. Politicians need to understand and follow the lines of thought because they need to be able to explain it to the people who have expectations. Also, understanding each other's roles does help. Apart from that, personal relations are important and are helpful when people keep the same job positions for years since there is time to build a connection and a collaborative atmosphere. In this context, direct contacts apart from official meetings have proven to be useful (WUP2):

> We have talks with the politicians and tell them if we see certain risks somewhere. At the moment, it works well, but it always depends on the political situation as well when the head of administration is from another political side than the city council. This would lead to prolonged decision-making.(WUP2)

In regards to coordination between the city and operator, there used to be a strong collaboration when the transportation plan was being set up in the 1990s and the network was being restructured. However, afterwards, the collaboration died out, and the city wanted to revive it. For this purpose, the city initiated a regular institution called a "working group" where coordination takes place. With the new transportation plan, the city hopes to get more conceptual influence. Wuppertal has a new commercial area, which needs to be connected to the transportation network, and there is an intense collaboration with the utility works and WSW to ring about this change (WUP2).

The relationship between the city and WSW is ambivalent. On the one hand, one gets the feeling that one belongs to the same group, but then one is also pushed sometimes by the administration in a direction one does not necessarily like. However, WSW has a strong standing within the city and in the public eye and is

perceived as a strong player. The concepts of purchaser and provider have not really found their way into the administration or to the public. The city should no longer leave all the planning and decisions to WSW but should still maintain an influence. So far, the current situation is acceptable because the public is not complaining, and the politicians are not reacting to it. It will change when the city has to cut services as a consequence of financial problems. It is good for the city administration to have its own ideas and not to always rely on the operator. The structural set up gives the city a large scope of responsibilities, which the administration is not fully accomplishing due to financial and manpower restrictions, however. Apparently, the boundaries are not always clear regarding where the responsibilities end and where the task of the operator begins (WUP1; WUP2).

Efficiency is ensured by the contract with the rule that the costs must not exceed those of an average company. In addition, the subsidies are reduced every year. Thus, WSW has to gain efficiency all the time. There is no incentive mechanism in the contract. The city can only give money incentives but is officially forbidden to do so because of fiscal restrictions. There is a performance-control system, and the operator has to deliver the data with the help of an analysing tool. Purchasing is based on the city's master planning, and the administration discusses this with the operator. When there are changes during the contracting period, the purchaser must coordinate the changes. Controlling would be more difficult with a private enterprise because the purchaser's position is lower with a service contract only. The analysing tool in combination with the owner's rights provides sufficient influence (WUP2).

So far, it has been possible to keep the service level most of the time and the operator managed with the current funds, but in March 2013,[30] some cuts were finally implemented. At the moment, transportation is still sufficiently funded by cross subsidies from the energy and water supply. The problem of diminishing profits in those sectors and the impact on LPT is somewhat ignored by politicians, according to the purchaser representative (WUP2).

Employees

The main change in efficiency has been achieved by cutting costs in connection with the drivers, although savings were achieved across all sections of the company, including the administration and overhead in the utility unit, according to the

[30] Email from city purchase manager V. Klöpper 19.2.2015

manager. The operator struggled with the trade union and employers to enable reforms. Wuppertal was one of the first cities to outsource services and thereby circumvent the trade-union agreement. In 1996, they funded a service unit that offered working contracts below tariff, resulting in heavy struggles with the trade union. By 2011, about 80% of the services were provided by drivers from a separate company. The drivers with old, privileged contracts indirectly profited from the lower salaries of the new personnel because the cost reduction from the new contracts contributed to a higher cost efficiency of the company so it could fulfil its target figures. As a side effect, the long-term drivers were allowed to keep their high salaries. This also helps to stabilise the system and service levels and avoids laying workers off so that jobs are safe at present. Of course, envy about the salary system and the fact that long-term employees earn a lot more exists, and there are people who liked things better before the reforms (WUP3).

Work admittedly got harder due to a competitive spirit, so one must be efficient in order to keep up the services. It seems tough for some people who are not used to that. Drivers are complaining about the shifts because they now are required to get up very early or come home quite late (WUP1).

Nowadays it is more difficult to get drivers; becoming a bus driver is not a number one choice for a vocation anymore, according to the Wuppertal manager. Fluctuation has increased, which shows that people are less attached to the job. All new drivers have learned something different, or they may have no education at all. The labour market does not offer many alternatives anymore, partly because the salaries for the drivers are so low and the economic situation is getting better. Consequently, people choose to work with private companies rather than with WSW. As a result, the employment office supports the unemployed and financially endorses driving licences in exchange for a job guarantee (WUP1).

WSW recognizes that employee motivation is important, including that of the drivers. A particular culture is within groups and enterprises. Where there are people working, psychology plays a big role, and this is often underestimated according to the representative. Thus, not only are salaries and working conditions important but so is motivating the workers. It is vital to see the company as one entity, to communicate and exchange information between drivers and management, and to include the workers in the overall entrepreneurial strategy (WUP3).

The customers' point of view

Services are not organised in Wuppertal in a way that would institutionalize customers' interests or guarantee that ideas are heard by the relevant decision makers and managers directly. Unlike in neighbouring towns, such as Solingen, people in Wuppertal can only complain or give feedback to the operator to have their voice heard. At least the customer management division works well, as there is one central contact, and one can always expect a reply (WUP4).

The quality of LPT in Wuppertal is regarded as genuinely satisfactory. Notably, the city did not cut services, despite cost reductions. Instead, the network has even improved since 1994 when the basic reforms started. Only some peak-time service has been cut during holidays. Reliability is not an issue in Wuppertal, as WSW rarely fails to deliver a turn. Only in very bad weather conditions, particularly in winter, do problems occur (WUP4).

According to the informant's observation, the buses are new, clean, and barrier free. There are no damaged seats or different colours used for the seats that are replaced—a problem that other cities in the region do have. The informant suggests that a public company is able and willing to spend money on such things, whereas a private company would go for a lower standard for profit's sake. When the city demands these standards or gives incentives, the price difference between public and private companies vanishes (WUP4).

The connection to the university as a point of special interest is very good despite WSW obtaining no extra income from it, since all users have an integrated ticket with their student card; with a service of every five minutes until the evening. The city is behind this service as well, but WSW is apparently recognizing the demand for service and communicates and defends it to the city (WUP4).

On the downside, users report that drivers apparently are less qualified than before. A number of drivers are unfamiliar with their area, so they sometimes are unable to find the correct way when there is a change in routes or at night. Another problem is that those who were driving trucks before continue to drive the way they drove freight, in spite of the fact that there are passengers on board. There is also a difference in service attitude if drivers are working for a subcontractor. The quality of drivers also means that they are able to give you the correct information, know where to look, and give you the right ticket. WSW drivers all have that knowledge, but those who come from other companies lack the knowledge even to use the printer or are too lazy to look up information, according to an informant (WUP4).

Passengers have noticed that communication has been reduced, and the drivers only do what they are required to do. For example, when you want to make a connection with other operators (e.g., regional lines operated by other companies), you cannot count on it, even when the bus is in sight. However, it works with the railway and with lines operated by the same company. One reason for this change is possibly that a company could be punished for not being punctual and does not see why they should be penalized when other operators run late. The users tend to blame this problem on the drivers (WUP4).

Institutional impact

Monopoly

Regarding the monopolistic service organisation, it is advantageous that the local public operator knows the (whole) market, so public transport can be regarded as one unit. The operator collects know-how and experience that can be adjusted to customer demands. According to WSW manager Hoffmann, the same advantages could be gained from a private company if the whole network had one operator and was not divided into pieces; "The customer doesn't care so much who is running the service, but they want to have one unit in charge of everything: for example, the prices, services or the schedule" (WUP1).

According to Hoffmann, there are a number of arguments against competition. He claims the city's transportation network is so complex that it would be a disadvantage to divide the network into pieces and that the customers would suffer the consequences of poorer connections. It is impossible to exchange buses in different parts of the city, making the optimal use of vehicles and personnel impossible. Hoffmann sees a minimum network size, at least to the extent of Berlin or Hamburg, while Frankfurt is too small. Another aspect is the organising effort, which is getting relatively bigger when the network size is small, as he refers to Frankfurt. He also doubts the sustainability of the market due to unhealthy competition for market entry and oligopolies prone to collusion. Finally, he argues that there are potential difficulties in financing via the regional public-transport authority, which could be entrepreneurial suicide (WUP1).

When one operator runs the whole network, it is easier to optimize the turns, like when one line can be combined with another using the same bus. This is the case for the night shifts in Wuppertal. In addition, connections can be maintained without

using central communication, which would be a lot more difficult if there were another operator. If one tenders the whole network, you again have a monopoly—this time, even a private one—that can do what it wants until the next tendering (WUP1).

Another advantage of one provider is that information is centralized, so it is easier to coordinate the buses, such as when ensuring connections. Still an additional advantage is to optimise bus use with the schedules. For example, at some points in the town, the buses cannot turn, so lines have to be coordinated. With a separate tendering, one creates extra kilometres. In this way, the connections are also ensured. In addition, the buses wait for each other when late, which likely would not happen under the operation of several providers, and this works even without outside coordination from "above" (WUP1).

Tendering big networks results in a small number of competitors. Potential entrants for Wuppertal might only be big players, such as Deutsche Bahn, Veolia and Connex, while others would not be able to run the entire network. One would also lose regional identity and connections. The public enterprises have their roots in the region, which means people know what they are dealing with, especially the personnel. An international player might bring in 300 new people from outside. In case of an unusual or a particularly big event like a demonstration or football match, outsiders would not know where to drive. In the Danish model, you are taking over the personnel, which would solve that problem (WUP1).

With tendering, one needs to consider how to deal with the profitable and unprofitable parts of the network. There will be high demand for the profitable parts, whereas none usually want to take the other lines in the first place—the typical cream-skimming dilemma. In the Wuppertal case, the air rail also needs to be considered for coordination and optimization (WUP2).

Monopoly has also another advantage according to the drivers' representative:

> This way, it is easier to form one entity with the drivers, to include them in the strategy, to have a uniform presence and also motivation, to exchange information in both directions—drivers and management. The significance of this is often underestimated. The driver is representing the company [to] the customer, which is hard enough, but if there is an outsourcing, the driver[s] [have] no representatives anymore, and it is more difficult for them to get motivated and to get qualified. Basically, a private enterprise could do this as well, if they don't change their management every five years just because the contracts are ending. (WUP3)

Effect of the operator being public

There are a number of positive effects from being a public entity. Everything is planned and executed by one hand. A public entity has a clear concept and is close to the city. Apart from that, communication is directed to the city, not the investors, so profit interests are not dominant. As a result, a comfortable, high-class service can be offered. Regarding the information flow, it is a lot easier to exercise influence on one's own operator. An outside operator only delivers business reports. The city as the owner has influence over the board and demands information. Also, the approach is much more direct since there is no need to check the contract first to verify or argue over rights. WSW has never fought against board decisions; even if there were personal disharmony in the management, the management would need to leave, as no owner would let that happen over a long period (WUP1).

Public units are more willing to keep reserves, while private companies probably would hesitate to have an extra bus for emergencies because of the costs. WSW is bound to the city exclusively, so they are able to cover the deficit of the high-quality service (WUP1).

One must keep in mind that the purchaser is always a step behind the operator, especially when it is not the purchaser's own unit. One problem is that the price calculation for the purchaser is difficult to verify, since the operator will not show his figures. Checking the operator's price calculation would require a parallel in-house controlling, which is costly and requires manpower. For this reason, the overall benefit of a lower cost per unit is questionable. Also "the proclaimed crystal-clear accountability exists perhaps only on paper, but not in reality. Theory simply splits from practice here," according to the WSW manager Hoffmann (WUP1).

From his experience, Hoffmann claims that the advantages of an integrated public service unit are the short distances, knowledge of what the city desires, and maybe knowing what is best. He added that trusting collaboration that is not driven by pure financial targets counts as well. However, clear rules must be applied here, and experience shows that politicians use the service units for their purpose and demand things from them, which from a strictly economic point of view would not be pursued. While the owners (i.e., the politicians) have the final word, the management can influence the owner and express to them what is or is not possible when there is a trusting relationship apart from the official negotiations and votes. Public utility works also have synergies. For instance, personnel and information technology (IT) services have been on a very high level, which could not be afforded

otherwise. On top of that, large units have positive scale effects when purchasing goods or when renting buildings, which reduces the overall costs (WUP1).

While concluding, Hoffmann remarked that he believes a public unit is not less efficient per se in structure or when it comes to flexibility. Instead, the result is rather the opposite after restructuring. Regarding planning, WSW has a cooperative edge with the city since it is possible to evaluate and investigate data more thoroughly. Therefore, a public unit uses fewer resources compared to a private company, which would need to invest extra for these resources. From the city's point of view, the owner can influence their operator more easily and effectively (WUP1).

5.1.2 Tampere

In Tampere, a purchaser provider split was introduced for all the public services in the city (Kallio et al., 2006). Before this change in 2006, the public transportation operator Tampereen kaupungin liikkenne (TKL) was integrated into the city structure (Lahdenranta, 2000) but was made an independent company. This meant the unit became an operator only, and both network and timetable planning have been given to the city, along with marketing and infrastructure. Together with these responsibilities, personnel also moved from TKL to the city administration. Most of the personnel continued with their responsibilities, including the manager (TMP1). Changes in the purchaser-provider split were sometimes only on paper, but the procedures remained as the same people continued at their workplaces. According to his own views, the position of the TKL manager has been weakened, as his unit got smaller and lost responsibilities. However, due to his previous standing and extra outside responsibilities, the network of public transportation made him an outstanding figure in the system, exceeding the influence of just an operator's manager. All this has changed since the new manager began in 2011 (TMP1).

Actors involved in Tampere bus transportation have varying opinions regarding why the change occurred. For the TKL manager, the city did not think the transportation service unit was particularly inefficient (TMP1), but the purchaser-provider split has been part of a whole new public-management strategy (Kallio et al., 2006), whereas the new purchaser-unit manager believes TKL has an efficiency problem (TMP2). The city and its own operator have a contract that defines service details. This contract includes incentives and is supervised with the help of the information system. It is believed that this move improved cost transparency and

brought cost-saving potential. The city saw the cost-reduction potential in public transport and sought several alternatives, but the public provider TKL managed to prevent competition by convincing the city officials that internal changes may reduce costs as effectively as a new competitive environment. The purchaser-provider split was a solution and a window of opportunity for TKL to remain public and apply reforms in order to cut costs. It is safe to say that personal negotiation skills and relations made a difference here, although gradually reducing subsidies increased the pressure to reform TKL. The idea was to have a smooth institutional transition through the introduction of structural reforms (TMP1).

The cost reduction argument dominated the debate, so at first, the decision makers were satisfied with an agreement to reduce the subsidies paid to the operator. Taking network, timetable, and vehicle planning out of the hands of TKL and connecting it with the city administration reportedly improved the coordination between land-use planning and public transportation (TMP2). Since the people remained in their positions, the expertise could be kept, and procedures changed less than one might expect. Also, power relations survived to some extent, as the TKL manager has had a strong influence as head of public transportation for decades and held positions in the regional and national transportation council (TMP1). In addition, the relationship between the purchaser and provider has been influenced by the fact that the actors have been working together in the same unit, and the line of order has been reversed. The purchaser unit tried hard to extinguish any doubt about their neutrality when dealing with TKL (TMP2).

From the perspective of the TKL management, the change was simply accepted rather than welcomed overall. In their opinion, integration into the administration did have synergy effects. In particular, the coordination of timetables and the drivers' schedules were seen as more efficient than the way things used to be. TKL was reluctant about that part of responsibilities, and the manager fought hard to convince the city to refrain from privatising or welcoming competition. In order to appease the city and keep the public monopoly, the TKL management and the city agreed on a cost-saving deal, which would annually reduce the subsidies paid to the operator. This deal provided grounds for structural cost-saving measures wherever possible. However, as the owner, the city still influenced the decisions made by the TKL management. For example, the company is obliged to use services from other city units, such as a repair shop, bookkeeping services, and real estate, which they regard as overpriced. Also, decisions on purchases like buses follow strict rules of public administration, which limit managerial freedom. On top of that, TKL is also used as a "test bunny" for new lines and does not get enough compensation. With

very few departures, the running costs are a lot higher than average. Due to these effects, they believe their price will always be a few percentage points over the production costs of a private enterprise. Still, TKL succeeded in fulfilling the financial targets, and their survival is currently guaranteed. Together with the split came an incentive scheme, which was very small and solely based on punishment in the beginning. Before that, there were no external performance controls and no incentives (TMP1).

The reforms did have a major impact on the workforce. As the drivers' spokesman explains, they have suffered from deteriorating working conditions in many ways; they have lower salaries, have lost special gratifications, work 10 years longer until retirement, are no longer paid for breaks, and are required to be much more flexible. Simple things like long-term holiday planning became impossible. Apparently, the fluctuation among the employees has increased, suggesting a reduced attractiveness of the job. As a side effect of a shorter career in the company, group identification is getting lost; the integration of new recruits with different cultural backgrounds adds to the problem. The changes led to employees leaving their jobs; while replacing the employees has been difficult, it is less difficult than in the Helsinki case (TMP3; Immonen, 2013). Since the workers were employed in the public sector, they had to be resettled in other areas within the city administration, which was not necessarily efficient (TMP1).

The TKL manager explains that from a passenger's viewpoint, users are not organised, just like in any other Finnish city. Changing the organisational structure had only a limited effect on them. The introduction of regular departure times was done in their favour but slightly increased the costs. The management maximized productive efficiency by keeping the times between turns to a minimum. As an effect, timetable departures were irregular, which was efficient but also odd for the customer. Another effect of this maximizing policy was a tendency for different lines to arrive at the central square so drivers could change. As another side effect, users could connect, but on the downside, the waiting times in areas with several lines was longer than necessary. Apart from this, the change in organisations has been neutral to them. There is a corporate identity, so the appearance of buses is similar and quality standards are strict (TMP1).

Classically, the city has had to cooperate with regional bus traffic across the city borders by companies that offered their services in Tampere as well. These private companies have been incorporated into the timetable, and income is shared between the operators. For this reason, a smartcard system was developed in the 1990s where each passenger could be tracked and the income calculated (TMP1).

There is still an on-going political discussion about how far to take the quasi-market idea for transportation in this city. Despite the successful savings, voices asking for competition grew, and in 2009, parts of the network were gradually put out for tendering. The purchaser-provider split has been only a transitional state and a precondition to gradually invite competition. This topic has been controversial in Tampere, but the head of the purchasing unit is an advocate of this approach, believing in even more efficiency potential through tendering. Tendering started as an experiment with just one line in 2009 (Aamulehti, 21.10.2010). TKL was denied entry because the city wanted to gather experience with private operators. The results were reassuring enough to extend the outsourcing process in the future to approximately 50% (TMP2). At the moment, the public operator is not allowed to participate in competitions. For the city, it is important to make a smooth transition to avoid extra pressure on the personnel. Gradually losing shares over the years will lead to a procedure where a reduction of drivers can be compensated by retirements, and no layoffs need to be managed (TMP1). Generally, the city acknowledges the value of having its own company; therefore, its survival is secured as long as it is not significantly more expensive than a private operator. It also works as a backup function if a private provider fails, or special events are in town (TMP2).

5.1.3 Comparison of the public monopolies (Fig.8)

Issue	Wuppertal	Tampere 2008
Organisation mode	Public monopoly	Public monopoly mainly
Background motivation	”Window of opportunity” cost reduction	”Window of opportunity” and economic free will
Background situation	Integrated public operator	Integrated public operator
City influence	High	High on TKL lines
Operators	1	1 (+3 regional concession)
Market dynamics	None	Increasing from none to medium
Profitability	-	- for TKL
Contract duration	Recurring, quasi infinite	Recurring 5+3
Contract flexibility	Renegotiations, service obligation	Renegotiations, service obligation
Incentives	-	Threat-based
Network fragmentation	One network	One network with a number of extra fragments
Workers' issues	Loss of income and benefits, Envy, poor atmosphere	Loss of income and benefits, poor Atmosphere

The motivation was similar in both cities. The actors agreed to use the contracting-in solution to avoid other alternatives like a sale of assets or competitive tendering. The public-transportation managers were able to convince the decision makers that avoiding transaction costs would benefit the city finances more than enhanced productivity through privatization or competition. In both cities, there was an agreement to constantly reduce costs through restructuring. In case of failure to reach the target, the administration would consider introducing competitive tendering but communicate that it was preferred to keep the public monopoly. The survival of the monopoly would depend on the success of improving productive efficiency and thus reducing public subsidies and also the belief that the other alternatives would do more harm than good.

Both public companies managed to fulfil their owner's targets, but Tampere decided to put a part of its network into the competition. While Wuppertal's changes in key positions did not alter the official view on this question, the change in Tampere seemingly did have an effect. The new head of the city's planning and purchaser unit is a strong advocate of competitive tendering for the sake of the operator's productive efficiency. At the same time, the retirement of the long-standing operator manager and previous head of the integrated unit left the position of the local bus company somewhat weakened. It is a clear indicator that influence and negotiation skills of individuals matter in decision-making and the way efficiency is perceived. It also clearly shows the struggle for survival for public operators as soon as their monopoly position is contested.

Both cities' transportation managers saw the pressure as a window of opportunity to introduce changes that would have been impossible otherwise. An essential factor for shaping the reform was the willingness of the players to cooperate and share the same goal. Cutting reserves (slack), reducing overhead in management, and also partly outsourcing were utilized for cutting costs. As public enterprises may suffer from the lack of reform and innovation, the threat of privatization and competition did weaken the position of those who see themselves as potential losers in the system. Namely, the labour unions and their local representatives would fight to keep their privileges. This threat, combined with the compulsory cost reductions, opened the door to changes, which were deemed necessary by the management. The management then used the cuts in subsidies as a pressure tool to reform the personnel structure. Note that these innovations and reforms are by no means pareto-efficient, as described below.

The reform had a strong effect on the workers, namely the drivers in both cities. Improved productive efficiency resulted from de facto salary losses and gained work-

plan efficiency. Wuppertal reported a substantial increase from 50% to approximately 80%. This means the time when a driver was paid but was not actually driving (breaks, transfer from and to the vehicle) was cut by more than half. Also, extra benefits that were usual for public enterprises but would surpass the private labour market were cut. Finally, certain liabilities were taken away from the operators so they were not obliged to keep drivers who were no longer able to do their job for health reasons. Those employees were transferred to other city units, sometimes against their will. Generally, the relation between management and drivers became difficult, and deteriorated considerably according to the drivers.

Technically, the drivers were treated differently in both cases. In Tampere, they remained a part of the operator TKL, while in Wuppertal, a new personnel service company was founded and another company had been bought. This restructuring resulted in three different tariffs for the drivers and caused a sense of injustice among them, which additionally divided the workforce into groups, harming the daily work atmosphere with the associated envy and competition. Workers have been generally unhappy with the reforms for numerous reasons described in the cases. Apart from a lower income, the management demands higher flexibility, which means that the shift plan is announced rather late and breaks between shifts are shorter. Driver representatives report that the sense of community is getting lost, and workplace satisfaction is lower. There is a higher fluctuation of the personnel, which is partly due to the necessity of accepting less-suitable applicants; however, higher amounts of sick leave are not shown. As a side effect, extra costs emerge when new drivers need to be educated, which come partly out of the city's accounts.

A key change for the public enterprises is that of character, image, and obligation. Public operators have to be as efficient as private ones due to economic constraints. Benchmark studies in both cities were used to set targets for improvement. Fulfilling these targets meant removing certain obligations from the units, such as being used as a social backup device for the city, which is costly and non-productive. Whereas additional jobs were created for such cases before, the cities now offer jobs in other parts of the city administration or encourage the worker to quit. Both options would outsource their respective costs.

Both cities emphasise the role of the customers more than before and understand their own role as a service to the people. Although only a change in language, Wuppertal says that transportation cases turned into customers, meaning that a change of wording goes along with change in philosophy and attitude. As for a real impact of this change in wording, the service philosophy shows improved service quality in the form of vehicle comfort, service standards, and communication. On

the other hand, Tampere had already improved the information system and comfort before the reform but did not improve the timetable service quality for the users.

The public character of a company does play a role when avoiding risks. Especially in Wuppertal, concerns about an uncertain outcome with unpredictable sunk costs and transaction costs were raised as one of the reasons preventing a further change in ownership or market organisation. Also, as the owner, a city can easily adjust reforms in the case of failures and use its own backup, like in Tampere, where the learning process for the newly introduced competitive tendering in parts of the network is still ongoing. Controlling is easier for public operators since there is less information asymmetry about costs and fewer incentives for the operator to exploit the situation through loopholes. Having a public operator helps both case cities to control behaviour and make decisions quickly, as compared to having a service contract with a private operator. A public operator is also used as a backup for larger events where private operations would reduce the reserves.

The city's influence as the owner continues to a certain extent. Tampere ordered vehicle maintenance to be done in the city-owned workshop, a service that would be cheaper than elsewhere, and rental contracts with city-owned buildings are overpriced. Still, it is impossible for the city to completely act like a private company, and the managerial freedom in a public operator is limited. Loans cannot be taken freely, and investments in rolling stocks need to be tendered. On the other hand, public managers do defend their own companies' economic interests against their owners, making the purchaser more cost-aware in the best case. There will always be some bureaucracy in a public unit and certain public demands, so the pure operating costs will be slightly higher than those of a private firm.

Losing the integration of a public utility in both cases results in the loss of synergies, such as in the energy department. The operator needs to pay value added tax for all services it buys from other city units, and the city must pay taxes for the services they buy from their transportation unit. If cross-subsidizing is made impossible, profits from one sector, like energy or water, are billed separately from the losses in transportation. As a result, the city pays more (unnecessary) taxes to the higher institutions. Synergies in Wuppertal also come from collaboration at the IT level, which otherwise would be unaffordable from much higher marginal costs.

Both cities decided it would be good to keep the planning know-how and split the operation from the planning. In this manner, the integration of land use and transportation planning was improved, and the result was regarded as efficient. However, it may not always seem efficient from the operator's point of view, especially when optimizing the work-plan efficiency. Yet today in Wuppertal, the

cooperation and communication between the operator and the planning department are not sufficient.

Cream skimming is a real concern in Tampere and a potential concern in Wuppertal. One advantage of keeping a monopoly is that coordination demand is reduced. For the customers, the connection service is better since buses from the same company wait for each other, which would not happen if the connection were provided by another company.

One problem is the fact that old structures prevail even after a long time, and the city unit does not have sufficient manpower to take things into their hands. Thus, historic structures hinder the effectiveness of reforms, which is inefficient, particularly considering that restructuring would improve the system. However, structures successfully surviving a reform could also be a sign of efficiency. A certain side effect of keeping the same people on the job is the minimization of transaction costs.

Willingness to cooperate with neighbouring towns and other operators in the outskirts could also be improved. In both cities, there are incoming buses that overlap local lines, but they are not sufficiently coordinated such that out of five departures, two would be redundant. In Wuppertal, collaboration on the planning level also needs to be improved when one line is served twice as much as another and one is the extension to the other. It might also make sense to use depots in the neighbouring towns to avoid empty rides in the morning and evening, as demand would suggest. It is possible for inflexible structures within the public administration to prevent system improvement.

5.2 Private monopolies

5.2.1 Pforzheim

Introduction

Until 2001, the transportation operator had been integrated into the public-service facilities to save taxes. Parts of the public utilities had been partly privatised, but public transportation was not one of them. In order to hold onto the tax-saving model, the city decided to make public-operated transportation a senior company that owned the public utilities. However, deficit kept on growing each year, and money problems further increased when other public enterprises made less profit than before. Thus, the city council decided to restructure public transportation in 2003 as a preliminary decision, and in April 2006, the final decision was made (Schütze et al., 2009).

The previously integrated unit as part of the city administration was reduced to purchaser duties and was responsible for setting the standards and contracting the operator. With this purchaser-provider split, the operator Stadtverkehr Pforzheim (SVP) was spun off from the city. SVP includes planning, operating, marketing, infrastructure, repair facilities, and vehicles as well as management, including personnel. It is important to note that the unit as such remains intact and is now under private control after a sale. It therefore has a high level of managerial freedom to lower costs and a raised efficiency (ibid.).

The plans were met by some public resistance, and there has been a public vote about privatisation. The vote turned out to be unsuccessful because not enough people (21.9%) participated in it. Of those, however, a vast majority voted against privatization (Schütze et al., 2009). Despite being unsuccessful, the vote led to the decision to keep a minority share in the city's possession. The result was mixed with 51% private and 49% public. The city is on the advisory board, but Veolia is leading the decisions and managing, whereas the city is only observing and controlling. The city thus has certain insight because it holds part of the company. Pforzheim decided

to have an institutionalised customer-service group, which tries to bundle and organise all the issues that public-transport users face (ibid.).

The city has been fairly satisfied with the outcome so there would not be resistance from their side. Quality has been stable, which they considered a success, despite reports that small repairs, such as air conditioning, would not be done immediately but instead after many weeks. Allegedly, the repair shop is busy with other work, so the city's own material is not checked properly. The economic results by the operator cause more concern for the city. There have been deficits of €370,000 and 870,000 euros, but 2010 ended with a zero. The city is pushing to expand the operator's service scope to generate more income. According to the contract, Veolia has to carry the deficit alone. Annual support for the operator is being reduced continuously, which automatically raises the potential deficit (PFO2, Pforzheimer Zeitung 5.2.2011).

Reforming the system

The main purpose for privatizing bus transportation has been economic and legal conformity to financing the services. Pforzheim has been in a severe fiscal deficit since the city supposedly lost millions of Euros. To solve this problem, they planned to privatise public utilities, including the transport sector. The initial idea was to save €21.5 million within 10 years, and one major approach was to reduce personal costs. The other reason for the first reform was legal compliance with subsidies according to the new EU legislation and keeping tax benefits within the public utilities. The city communicated the significance of sustainable changes instead of a short-term gain. It was seen as important to have a benchmark for costs and to enable the creativity of entrepreneurs. Another reason for the sale of assets would be to ensure fiscal liquidity at times when municipal finances were extremely problematic. A joint venture would have limited financial risk for the public with this solution and would be in line with a certain political view32, since the city administration is reduced to its core competence and tasks (PFO2).

For the operator, the management was afraid of not surviving a possible compulsory competitive tendering, which would have led to an array of problems, so they agreed to this idea as well. Then, in 2003, the city operator developed a

[32] Then Mayor C. Augenstein was from the liberal party FDP

strategy paper that detailed how to reduce financial support for the public-transportation sector. The first idea was to reduce the services and raise ticket prices by 10% in two years without losing passengers. Secondly, the more-important lines changed from a 10-min. to a 15-min. frequency but with optimised connections in the city centre so there was an actual improvement in the services for the city centre. Finally, the idea to found a separate independent transportation company like in Frankfurt or Berlin emerged. However, the city wanted to privatise transportation, as had been done with the public utilities and the hospital in the city. Before the change was applied, KPMG was consulted to investigate if a privatisation was economically beneficial, and the study suggested a public-private partnership (PFO1).

Transaction costs arose while dissolving the present structure when the then-operator was asked for a stand-alone calculation for what the public provider would be able to offer as a benchmark. Then, the private competitor had to be below that figure significantly in order to get the contract. According to management, "It has been quite some work to calculate this stand-alone scenario" (PFO1).

The public operator felt treated unfairly because the consultants factored in their disadvantage. For example, they did calculate some risk in case the city's own company lost the competition, and the consultants added more risk on top of that. This caused reportedly intense discussions, but everyone finally agreed on one break-even point. The manager felt that "this had been quite a nerve-wracking procedure" (PFO1). SVP Manager Schwarzer described the development as follows:

> So finally the public utility was dressed up and sold as a "pretty bride" without extra duties or liabilities, which have been left with all the troubles and problems in the city. So we have had deficits and had to deal with problems left behind by the public utility. Then we had the special agreement with the workers running out, so that new personnel would have been expensive for us. [At] the same time, the municipality's income would drop considerably because a lot of our jewellery industry disappeared in the crisis. For many years, our city has had the highest unemployment rate in the region. So it was obvious to me that we had to [make] some change." (PFO1)

The search for a strategic partner for the operator has been conducted with the help of a public tendering. Two options have been offered: one for the majority and one for a minority joint venture. There has been an emphasis on restructuring and optimisation know-how in order to cut costs, followed by the possibility of raising

the turnover by opening new businesses and minimizing their size and experience with the tendering of public transport. Finally, there should be a convincing future concept for the time after the contract ends. Applications have been checked for sustainability and credibility in individual talks. A private enterprise should be applied only after making sure that this model would be cheaper for the city (PFO1).

Finally, 51% of the operation was sold to Veolia (Schütze et al., 2009). The selection process also considered who was applying and how much expertise was needed in the field. There have been 10 companies interested in the tendering, and six asked for details about the data. Finally, there have been four competitors, of which only Veolia managed to get below the break-even point. Veolia's offer was a lot cheaper for the city, so there was no way to argue about keeping the old system. Finally, the decision was about the price as well as the quality (ibid.).

Some voices doubted if Veolia's calculation were honest and economical. Indeed, Veolia's calculation included an overly optimistic amount of bonuses, something the incumbent city operator did to a much less extent. Yet it was not the difference in calculating bonuses that made the difference between Veolia's calculation and the city's calculation. Veolia also had a better offer due to the company's experience with reforming and operating LPT (PFO1).

A number of transaction costs emerged in the process. Apparently, the procedure required a really long time before it could be finished: 2003 to 2006. The city considered it very important to get consultants to support the process: a contract without any gaps. According to Schwarzer, Pforzheim paid more than half a €1 million for consultation throughout the process. Prior to the transition, difficulties in the bookkeeping needed to be solved in the years 2006 and 2007, resulting in excessive extra work in order to get the books past the revision (PFO1). There have been pioneering troubles with registering the new unit, as the court saw the whole previous unit disappearing and merging into the new SVP. However, the city finally managed to get the registration in April 2008 (Schütze, Rompca, & Mellenthin, 2009).

In the transition from a public unit to a predominantly private one, no personnel changes have been made, and 260 employees remained in their positions. By keeping the unit whole, it was possible to maintain lower transaction costs, as establishing a new company would have produced additional costs. The SVP manager began in 1992 and took the lead position of the operator in 1998. When the position of regional authority became vacant in 2001, he took on that responsibility as well. At this point, he was both a purchaser and a provider all in one person, "which has been the most exciting time so far," he said, "and I could work very creatively." With the

privatization in 2006, he had to give up the position to their regional transport authority (PFO1).

The local public transport company was legally transferred to the new company, which is operating as a 'limited'. The new unit received all the properties, especially the buses and all personnel, including concessions. Only two and a half workplaces, the depot, and the infrastructure at the bus stops are all that have been left in the hands of the city. The depot is used by other parts of the city services as well, so it was retained. Also, the repair shop remains in public hands. Keeping the infrastructure in one organisation makes it easier for the city to dissolve the cooperation. In that case, it is mainly the buses and infrastructure that need to be repurchased. Again, someone would be required to do the bookkeeping and accounting, which is done now in Berlin. For the next round in 2016, Veolia has a significant advantage with their now-optimized structures. The procedure would look identical to the last time in their search for a new partner.

The city

A group of citizens represented by a party that opposed the privatization was partly supported by the operator's employees but partly lost that support after a salary agreement between the operator and the employees was signed. One citizen movement called "Bürger in Pforzheim" managed to enforce a public vote regarding the privatisation plan. This vote was linked to a quorum of 21%, and only 16% appeared. Despite this failed quorum, the city council decided to take the vote into consideration and keep a part of the operator (PFO2).

The city is both purchaser and operator in a public-private partnership, so the same owner has a hybrid role and diverging interests. Therefore, the city acts differently than it would with a fully private operator. From the perspective of the operator, the city's emphasis should be more on the purchasing part. On a positive side, the management can operate quite freely. A 49% ownership gives the city information about the operating company and its potential influence. At the times of the interviews, the city was reasonably happy with the situation and did not want to exit the contract. For the politicians, it is important that Veolia pays the deficit fully by itself, so there is budget security on the public side. The service quality has been satisfying as well, as customer feedback has been positive. Thus, cooperation

would be good to continue from the city's point-of-view. However, recently, voices have been raised that demand an end to this public-private partnership (PFO2).

Changes improved the transparency of costs due to another split of purchaser and provider. If the city wishes expansion of bus services that are not according to the standard of the contracts, then they have to be purchased separately. In the contract, there are rates for additional costs in this case, so the city can know about and is able to plan further costs.

The city's deficit, in connection with public transportation, was €5.9 million in 2008, compared to €9.3 million overall in 2003 when the public operator had the biggest deficit. However, it is difficult to assess how much the city really saved because there are, for example, one million expenses per year that are reserved for the pension gratification of previous workers. The city claims that between 2007 and 2009, €1.8 million was saved. Support is being cut by half a million per year to 13 million in 2010. Ticket revenue belongs to the city but will pay a bonus to the operator when income improves. Veolia carries the whole entrepreneurial risk, and the city has budget security.

From the point-of-view of the passenger union, the city evades the responsibilities connected to the bus network and small duties on the operational level. Cars are parked at the bus stop so the drivers cannot access the bus stop, and people with mobility problems have difficulties in accessing the bus. Another problem is that when snow is blocking access, the city should take care of that. The passenger association feels that the city was more careful before it was privatised. Some practical organisation problems are related to elderly residences when the bus has to stay in the middle of the road because of parking cars, making it difficult for the passengers to embark. As a result, the driver gets the complaints, but the ultimate responsibility lies with the city for its failure to enforce parking regulations (PFO3).

The operator

The operator has a complex set of contracts. First, the joint venture contract between Veolia and the city is set up in a way that the special tax-relief model can be still used. The city-owned utility unit also holds shares of the transportation company SVP. Otherwise, there is a transition contract and a traffic-related contract. Furthermore, there is a framework agreement, which regulates everything related to the personnel. Next, there is a declaration of patronage by Veolia, which ensures that most of the deficit that the operator contributes needs to be compensated by

Veolia, and the city is only responsible for their share. This one thing was very important for the city to ensure that the price offered in the competition would be kept. This declaration specifically prevented many companies from applying. One smaller enterprise tried to cover this with a bank backup, but costs for this were significant. Also, in case the SVP goes bankrupt, Veolia was obliged to take over the deficit and run the service at its own costs if necessary (PFO1).

In 2007, the operator finished with a 6.6 million deficit, which was the best result since 2001, the worst being in 2003 with a 9.3 million deficit. So far, the deal has not been good for Veolia. In 2009, they had a deficit of €860,000 to the entire disadvantage of Veolia, since the city provided no extra support. However, the Veolia management believes the situation will improve soon. In 2013, the salary agreement was renewed. The operator does not want to pay rather the private instead of the public one, and it will also be possible to lay off personnel. Drivers who are currently employed already work for less money than their colleagues. The drivers announced massive protests connected to this issue (PFO1).

The city budget has less influence on the service, which is regarded very positively by management, because interference could cause cuts in services. It is important to emphasize that the operator generally has high managerial freedom and attempts all measures to improve efficiency. The operator can leave out services, buy outside services (for example bookkeeping) from the city or share facilities if needed. Veolia is able to utilise economics of scale and scope, such as bookkeeping. Previously, SVP paid €900,000 to the city and then negotiated it down to €700,000. After being independent from the city, they got an offer for €300,000. Still, they decided to give it to another Veolia unit for €220,000. In other words, the advantage could not be realized as expected. Regarding buying new buses, a 10% reduction has been projected, but Veolia miscalculated because the public operator's deal with buses was good already when Veolia ordered, for example, 10 buses at one time (PFO1).

It is by chance that Veolia is running two public utility services in the same city. Waste-disposal services were acquired roughly at the same time that Veolia took over the bus services, but there is not much connection between the two sectors. There is cooperation, however, in the cleaning facilities. Now Veolia environmental services is doing the job and using the same people as before. Other ways to save money were, for example, to sign a contract with the tire manufacturer Michelin and then offer services to other companies in the region. For example, Veolia uses the city for bookkeeping or hires another smaller bus company, which has the same manager. Apart from that, the manager sees synergy effects with the mother company Veolia. "For example, we needed some minibuses, which were not available on the market

here, so we found someone in the group to sell them to us". When asked what effect on the operator Veolia had as a new private owner, the old and new manager of the operator expressed that the effect lies in the sum of a number of small things, mainly the bookkeeping. Veolia brought restructuring know-how and introduced entrepreneur-like thinking. Cost consciousness increased, and reforms could now be implemented with much higher speed than in a purely public enterprise. On the downside, for example, computer support was better when the city was running the operation, while the costs have remained the same. It was simply more practical when the people were all in the same building; also, the reliability of the network was better (PFO1).

According to the joint venture contract, the subsidies are being cut successively, and Veolia must pay any potential deficit. The city would benefit from profits from their ownership share of 49%; however, at the moment, there is not any profit. In 2009, the result was very poor, and 2011 had a projected minus as well. Consequently, in the subsequent competition after the end of this contract, the amount of money paid by the purchaser will have to be increased. Interestingly, it seems that Veolia is counting on getting better terms when the new contracts with employees are negotiated in 2014 (PFO1).

Finally, the end of the joint-venture contract is regulated, and there are call and put options. For the city, using the put option means selling its entire share to Veolia. On the other hand, it is possible for the operator to be a 100% publicly owned company. At this point, it is difficult to say if any of these options will be taken; the contract is valid until 2016. The city has the option to either make a new competition or directly contract with an operator. When the company has a private ownership, it is not possible to directly contract the service, so there must be competition at some point (PFO1).

The contract

As described above, there are several contracts involved in this arrangement, and this section deals with the traffic-related service contract. It is important to notice that there are two different contracts: one between the city and Veolia where both own the operator and which was discussed in the operator section, and the other between the city and the operator SVP, as described here (PFO2).

The city defines the terms and standards in the service contract. The contract should provide a "long-term perspective" for the new operator for the sake of the

employees' stability. The public unit keeps a responsible role and sets basic standards for the service through quality management and the contract. However, the city cannot directly influence the planning, the timetable, or the network. The city somehow has a double function as the owner and the controller of the operator. In case of doubts, the contract between the operator and the city is decisive and not a joint-venture treaty. The city does not really have ways to put pressure on the operator; there can only be communication. The city takes care of the vehicle subsidies, so there is no risk for the private company in this respect. Finally, the city does controlling and gets informed about the final figures of the bookkeeping (PFO2).

The contract between the city and provider signed in August 2006 includes all regular lines operating in the city area. The contract is purely functional and does not include timetables and routes, so the operator can optimise them. Instead, the contract defines a minimum service quality that prevents it from dropping below its position at the time the contract is made. Minimum requirements include quality, capacity, and frequency. Furthermore, a maximum travel time between the city centre and the railway station has been defined, which should prevent the bus lines from being excessively odd. Finally, there are regulations of waiting times at line or light rail transfers. For capacity, there is a minimum requirement of persons per square meter; if demands change or capacity is improved, the operator has to carry the costs. There is a list of requirements for the vehicles as well, like a kneeling facility and visual and audio information systems. Even sales and the managing of complaints have been transferred to the operator and are part of the service contract (PFO2).

SVP manager Schwarzer describes the traffic-related service contract as follows. It sets service standards and is a functional contract; that means that an area with a certain population structure has to be served a certain number of times per hour. According to the opinion of the operator, this framework makes things inflexible in comparison to the previous situation. When demand changes during the period and service needs to be adjusted, an announcement must be made six months in advance of the adjustments, according to the agreement. As an integrated unit, the purchaser and provider could internally make the decision and ask the city council for their confirmation in case there were major changes. The purchaser unit has to be convinced first, who then goes and approaches the city council. This is a longer process, and the chance of rejection is higher. Despite the functional label of the contract, it is actually less flexible. According to his own experience, the SVP manager claims that a strictly public enterprise can work better than someone who

is bound by a traffic contract. One example is the connection to the university where there is a capacity problem; the operator was planning to increase capacity. However, the city refused to subsidise, citing that according to contract, the operator is responsible for providing sufficient capacity. "Technically, they acted correctly, but it has bad consequences. It comes from the system of having a contract, which has been kept consciously strict, so that the operator cannot start to reduce services" (PFO1). These aspects reveal typical bounded rationality issues related to contracting, and this case in particular shows what happens when the operator becomes private. There is also a regulation about price adjustments, and the details regarding how to calculate these adjustment have caused a major disagreement between the actors. The difference was between €600,000 and €800,000 and led to an institutionalised settlement (PFO1).

Buses must comply with multiple quality and physical standards. For example, they have to fulfil environmental standards. They also have an information system, and the appearance of the buses is precisely set, with a maximum age of 12 years. Buses that are used outside of peak hours have an age limit of 15 years. Furthermore, they have to fulfil the environmental standard Euro Norm Five. The vehicles' average age is just below seven years now, but cost pressures have led to a situation where, if a bus is 10 years old and the engine breaks, the engine does not get replaced but just repaired, with the hope that it survives the rest of its lifetime. Even the manager believes this practice to be unwise (PFO1).

The contract includes a strong incentive system so that when there are more passengers, 90% of the extra income will remain with the operator. On the other hand, if buses are more than five minutes late, the operator gets fined; these fines are especially high when the buses fail to run a turn. The contract does not put much focus on the network, but the number of passengers is decisive. An institutionalised meeting takes place between the city and the operator. The operator has to publish on the Internet its service quality statistics, like punctuality or failure to deliver turns. If the operator fails to do so, there will be sanctions (PFO2).

The service contract has strict customer compensation rules. When a bus has a delay that lasts more than 10 minutes, the users are entitled to compensation if they have to call a taxi instead. Still, the regulation says that the user has to call to the service centre before taking that option, which is unrealistic. Often, the customer then wants to have his/her taxi bill reimbursed and is often turned down because he/she did not call in advance. The operator may compensate and decide to be more flexible and generous in favour of the user than the city and the contract demands.

Attempts by the operator to instate this rule into the contract have been rejected by the city, which refuses to renegotiate the contract (PFO1).

Additionally, the contract regulates that there has to be a union of passengers organised by the operator. The union then has to manage its complaints, and there is a maximum reaction time to complaints and an obligation to post statistics. Finally, there is a duty to evaluate and report information about delays and the sales of service, to maintain databases and provide fixed reports, and to have information cycles (PFO3).

In 2016, the city and the private operator will renegotiate the contract. Most of the optimisation has been done already, so according to the operator's manager, there is not much room for improvement regarding productive efficiency. He predicts that the next contract will be not cheaper for the city (PFO1).

Effect on employees

The salary between employees and the company is based on the general agreement between the trade unions. Extra gratifications for the previous employees are paid by the city, and the company pays only the basic tariff. Also, new workers get additional pension support; however, this gratification is much lower than it was previously. For the employees, it was very important that no layoffs should occur until the end of the contract in 2013. The contract between the city and Veolia also includes a social plan, which raised the number of apprenticeships in the company from 6 to 12 (PFO4).

Throughout the process, there have been repeated negotiations about the driver salaries. In 1998, the public SVP agreed to reduce the salary of new employees. It had to get special permission for that, as did all other municipal units. After the agreement expired, the trade union did not accept further exceptions to the tariff. No more than 50 employees were allowed to be exempted from the tariffs before the oldest work contract would need to be upgraded. After a strike, a new compromise was reached, and the limit was extended to 75 before that limit was reached as well in 2001. Trade unions did not want to accept more, which led to strikes yet again. Finally, in the year 2005, the parties reached an agreement based on the union agreement without a retirement supplement. This is less than the initial offer from the regular union agreement deal in 2003. However, the situation changed, so the employee representatives had to accept the deal for the new

employees, and there still would not be any additional retirement benefit. That salary agreement also served as a compulsory component in the tendering (PFO1, PFO4).

Reducing costs mainly meant doing away with "competitive" salaries, so income has decreased for the personnel. New colleagues receive several hundred euros less than previous workers. The trade union agreed on a new salary system with the company on the premise of a workplace guarantee and that existing privileges not be cut. At the same time, there would be no additional benefits for new workers, creating a two-level salary system within the unit. A significant increase in productivity came by changing working times and break regulations while reducing the income for new employees and cutting their extra retirement. Employees have been transferred from the old integrated unit into a semiprivate body. It is important to mention that the difference in income between old and new working contracts is not paid by the employer but the city, as are the pension benefits for previous workers (PFO1).

Since there is a new private partner, the company received pressure in certain respects, such as how sick leave is provided. It was previously 10% but has dropped to 7%. While this is still a good rate compared to other public enterprises, it is not as high as that given to employees at other parts of Veolia. The focus is a safe job, so the chance that employees would rather stay at home is higher in a public enterprise when they do not fear to lose their position (PFO1).

Privatisation of the company was also a welcome opportunity to get rid of employees that were difficult to work with, according to the manager. The operator would not provide jobs to people who did not want them. For example, there are still two people from another part of the public utility who could not continue their work and were forced to take the occupation of a conductor. Finally they came to terms with the new job, but they are still not entirely happy with it (PFO1).

Customer

The Passenger Service Group[33] has been founded as a result of the privatisation and is part of the service contract between the city and the operator. This unit began its service in 2008 and is mainly supposed to suggest improvements. There are quarterly meetings with the purchaser unit and the operator. Representatives of the drivers are sometimes also present, as they organise the meetings. It took a while to get things

[33] It is called "Fahrgastbeirat" in the German language.

started. In the first 18 months, there were frequent changes in the top position, and it took some time before people noticed the organisation. The Passenger Service Group has a chance to consult the mayor and the city executive (who is on the board at Veolia) with any issues. In the beginning, the drivers resented the institution, but bus drivers are also welcome to address the service group with their problems. Even though the institution is primarily meant for passengers, the group also listens to the issues of the personnel and try to mediate between users and drivers (PFO3).

Cost savings are reinvested in new bus lines, so service quality is improved. The user group initiated a cheaper so-called city ticket, which is used for a maximum of three stops; in the summer, a heat ticket was instituted. At the moment, the city is trying to get a special ticket for elderly people as early as seven o'clock, because many have to be at the doctor at eight a.m. Overall, the user representatives consider privatisation as mainly a good thing, although it took a while before things were running well. Practical advantages for users are that there are more shelters at the bus stop, and the schedule cannot be changed during the season. In addition, the user's group managed to influence service improvement, such as for the university where the bus had always been overcrowded (PFO3).

The standardized annual customer satisfaction evaluation has shown stable results. Overall satisfaction was a 2.3 in 2007 and rose slightly to 2.2 the following year on a scale of one to six. The operator provides punctuality, cleanliness, and information guarantees; should a customer miss a connecting bus or should it be excessively late, he/she will be paid a taxi ride or receive a compensation of €10, independent of the causes. This way, there should be an improvement of acceptance in using the buses and motivation for the operator to provide a functioning system. The quality of the buses is not problematic, but they are not as clean as before the privatisation. However, since quality control is not checked frequently enough, one could say that this bus should not operate because it is too dirty. And the passenger service group has to complain until the buses are clean. It is said that other bus companies have clean buses and that SVP bus clients pay for services that are not given (PFO3).

The average citizen supposedly does not care how public transportation is organised. Opponents argue that with privatisation, everything is getting worse and ticket prices are rising. They also say that the previous mayor had been paid by Veolia. One political party is especially outspoken about it; the group was called WIP, which sits in the city parliament (PFO3).

5.2.2 Jyväskylä

The town in central Finland represents a private monopoly scenario and is the only case in this study where the transportation has been initiated not by the authorities but by the market. As the operator's manager describes, Jyväskylän Liikenne Oy is the only operator given a concession to run the services, and for many decades the organisational structure of LPT remained unchanged. Since the concession granted an exclusive right to run services, there has been no competitor (JYV2). According to the city officials, the only alternative for them would have been their taking over the service production themselves, but they decided not to go this far. A close long-term relationship between the city and the private provider has been the basis for all interaction. Due to the lack of tasks, the responsibilities in the city are impacting the private operator, and the expertise in that part of the city is rather weak, so that planning has also entered the sphere of the operator. The evaluation of demand and provisions is mostly carried out by the operator as well (JYV1).

The institutional framework is a service contract between the city and the operator. While the operator's concession is based on profitable services that would not have subsidies, the city pays support to the provider. In the 1970s, with the increasing use of private cars, the business became unprofitable, and the city decided to support the transportation network in order to prevent cutbacks. Since then, the subsidy level rose to roughly half the total costs. If the city has particular wishes about the service, they have to negotiate and pay extra for these services. The negotiations about the subsidies are held annually and are paid as a supplement for each ticket (JYV2).

The city administration had a two-sided opinion about the situation. On the one hand, they consider the relationship successful, trusting, and reliable without having had any major communication difficulties in the past. On the other hand, they feel restricted in their position, taking into consideration information such as money flow and the real costs to run the service. The lack of access to information raised questions concerning if the operator was being overcompensated. Furthermore, the city can only negotiate with the operator about the level of subsidies and can only order certain services. The only other alternative would be the establishment of its own company, but the fear of transaction costs and of jeopardising the relationship with the private operator would stop the city from doing this. Instead, the city would engage in a service contract that keeps most of the key tasks of network planning and timetables, as well as marketing, at the private level. This collaboration depends on mutual trust and successful and fair negotiations. Naturally, this institutional

setting involves information asymmetry. Taking over as the only alternative was not considered a feasible option for the fear of physical transaction costs and the lack of expertise. Thus, a part of the city administration was unhappy about the lack of options by the previous regulations and had already expressed their desire for change years before they could act (JYV1). The idea of changing the system was strong enough for them to make use of the new legislation, and preparations for the tendering procedure were made in late 2013, even before the act was enforced, which included obtaining all the knowledge needed by the city administration prior to the tendering process.

Koiviston Auto also operates in other cities of Finland based on the same regulations as a private monopolist. It is responsible in those cities for related tasks, such as planning and marketing as well. Due to its arrangements in other cities, it is able to utilise scale economies, such as rolling stock and legal services. One particular aspect of this company is the fact that it produces its own buses, which are called a Kabus. According to the manager, these economics of scope do play a role in reducing costs, as buying the vehicles on the market would be more expensive. As a company, Koiviston Auto has long-time experience providing transportation, so it can be assumed that it has gathered sufficient expertise on organising LPT. The manager is very aware of the significance of having a good relationship with the city administration and reports success in doing so. According to him, it is helpful that on both sides, the same people have been involved in coordinating for over 20 years, so a trusting and reliable relationship could evolve. Jyväskylän Liikkenne favours the monopoly situation over a competition scenario. When talking about incentives, attracting passengers is the main motivation. The operator not only keeps the entire ticket income but also receives extra subsidies for each ticket sold (JYV2).

Regarding the workforce, Koiviston Auto's representative expressed how content the personnel are with their situation regarding their working environment and salary. Usually, workers tend to stay with the company for a long time, sometimes during their whole working life. Strikes are rarely a concern, as employer and employees reach agreements easily. Overall satisfaction among the workers is high (JYV3). According to the management, there has never been an issue finding drivers, even in boom times when other cities have had difficulties (JYV2). Now in the current competitive environment, their position is secured, since tendering regulations force the winner to take over the personnel from the previous provider under the same conditions.

From the consumer's point of view, it is important to notice that there is no institutionalized representation platform, and ideas as well as complaints can only be

directed individually (JYV2). Since there is only one provider and there have been no changes in the organisation form in decades, the users have no way to compare the service. It would be unfair to compare the service frequency and network with other Finnish cities in this study due to their differing sizes. However, other studies (Rosenberg, 2005) have concluded that fares are high, and—on an entirely subjective note—Kabus produces vehicles below the comfort level of competing manufacturers.

As mentioned above, collaboration with the private service provider has not been without problems. Despite the allegedly successful cooperation, the city is not exactly happy with the costs and lack of influence, knowledge, and information (JYV1). Only recently, the city council decided to opt for a competitive tendering solution after the new Finnish law finally allowed this possibility and after the case study was conducted. They took matters into their own hands and organised competitive tendering (Jyväskylän kaupunki, 2010). The uncontested operator's dominance in the city comes to an end in June 2014. Jyväskylä was the first in line of midsized Finnish cities to put a private monopoly out for tendering in 2014.[35] The competition results surprisingly saw Onnibus as winner (Helsingin Sanomat, 21.10.2013) in four out of five lots, and the company was then under pressure to recruit a sufficient number of rolling stock and workforce employees. However, the incumbent decided not to release its workforce, leaving the option for Onnibus either to find about 100 new drivers within half a year's time or subcontract its newly won licence. They took the second option, so Jyväskylän Liikkenne will continue to provide the service (Keskisuomalainen, 4.3.2014), albeit under different circumstances: from a monopolist to a subcontractor in a lost competition. In the future, it will be interesting to see if the communication between the city and the operator has suffered from the move to introduce competition. After all, the decision for tendering was directed against the operator.

The result of the tendering is interesting; the incumbent surprisingly lost the competition but will continue to operate after buying the licence from the winner Onnibus (Keskisuomalainen, 5.3.2014). Possible reasons for this result are the abuse of monopoly power by refusing to transfer employees—which made it impossible for the winner to start the service—or a failed price speculation by the incumbent's management. Market-entry barriers also play a potential role, and the question remains regarding how much competitive tendering can ensure a true competition.

[35] (http://www.jyvaskyla.fi/kadut/joukkoliikenne/joukkoliikenne2014)

5.2.3 Comparison of the private monopolies (Fig. 9)

Issue	Pforzheim	Jyväskylä
Organisation mode	PPP time-limited monopoly	Private monopoly until June 2014
Background motivation	Economic emergency	Legal constraints
Background situation	Integrated public operator	Exclusive concession rights
City influence	Low	Very low
Operators	1	1
Market dynamics	None	None
Profitability	Very low	High
Contract duration	8 years	Recurring until 2014
Contract flexibility	Functional contract, renegotiations	Renegotiations
Incentives	Very high	Very high
Network fragmentation	One network	One network
Workers' issues	Loss of income, benefits	Positive: Job Safety, good Atmosphere

The background in both cities has been very different. While Jyväsklylä had the same private operator with a concession and hence "inherited" the mode of organisation, Pforzheim had a public enterprise, and it decided to sell the majority of it through tendering. The different background and path dependency help to explain why the character of the local bus transportation in both cities varies so much. By continuing to use the previous system, Jyväskylä has limited transaction costs mainly to the negotiation process, while Pforzheim reports significant costs of this kind during and after the over-three-year process; applying the changes included

costs for external consulting and revision of the bookkeeping. Above that, transaction costs emerged for other parts of the city administration because liabilities were taken away from the Pforzheim operator and obligations like pension responsibilities were "outsourced," so a comparison by the operator's balance figure would be misleading. These transfers are negative externalities to other city units.

The Finnish city suffers from considerable information asymmetry, since all planning and operating is done without participation by the city, and they only confirm what is suggested. Demand and operating costs are known exclusively to the operator, and the city needs to rely on the operator's data where they are made available. Even monitoring is done by the operator due to the lack of manpower to prevent the city from knowing about the results. By way of contrast, Pforzheim has all the knowledge needed to make an informed judgement, since it retained ownership of a part of the operator after the sale; in addition, monitoring results are available to the city. In this context, a public-private partnership helps to overcome the information asymmetry problem.

The operators' economic positions are very much different from each other. Profitability is very stable and considered both sufficient and healthy, while the Pforzheim operator suffers from a "winner's curse" in making assumptions and calculations that turn out to be non-realistic. In this case, the winner's curse endangers the company's survival. Such a winner's curse of course can only exist in a competitive environment, whereas an incumbent operator will have enough information to avoid miscalculations of this type.

A high degree of managerial freedom exists in both cases. De facto, it is a bit lower in Pforzheim where a functional contract exists, defining minimum standards and setting a lump-sum subsidy for the entire network. On the other hand, the Finnish operator has even fewer constraints than its counterpart and can plan its network strictly according to economic reasoning, despite technically still needing the city to decide about bus lines. However, giving up services completely in an area would mean losing the concession and indirectly inviting a potential competitor into the city. Incentives for the operator are on a similar level. The Jyväskylä operator is the sole beneficiary of regular ticket income, while in Pforzheim, the contract grants 90% of the extra income of an increased number of passengers.

With a high degree of managerial freedom, the cities' influence is naturally limited in both cases. In Jyväskylä, the town administration has neither a direct nor a strategic influence on the service but must explicitly order (and pay for) it in case it is needed. Pforzheim, on the other hand, does have strategic influence over the network prior to tendering. By setting minimum standards in quality, capacity, and frequency, it is

able to secure services, which are then fixed for the whole term. Possible extras need to be negotiated individually like in Jyväskylä.

Cooperation among the actors, especially the willingness to collaborate, is very important in a monopoly. The problem of the free relationship that has existed for decades between Koiviston Auto and the city of Jyväskylä is seen in a very positive light by both sides, while the relation between SVP and EVP in Pforzheim is not free from difficulties, despite information asymmetry, the fact that Pforzheim continues to be the part owner of the operator, and that the main individual actors are the same as before the reform. The main difference is that Koiviston Auto has a comfortable niche in which to survive, while Veolia is continuously struggling with deficits. These financial difficulties may put them in a naturally antagonistic relationship with the city as the purchaser.

Considering the personnel, their situation in both cities is significantly different. While in Pforzheim, the drivers experienced salary reductions below the labour-union agreement, and personnel had been cut rigidly, resulting in strikes and long-repeated negotiations, Jyväskylä's personnel experienced no strikes, and drivers report no complaints. The salary and workload is perceived as constant, and the working atmosphere is regarded as good. It will be interesting to observe changes after the tendering process in Jyväskylä. Fluctuation of the drivers is low, where it is high in Pforzheim; however, the general difficulties around the year 2008, when drivers were difficult to find, also found their way to Jyväskylä.

Customer position has improved in Pforzheim, as their voice and influence have been institutionalised, while in their counterpart city, the users have no other possibility than to individually complain to the operator. However, practically, the influence in Pforzheim is limited to making suggestions and discussing ideas with both the city and the operator.

Flexibility in the system and adjusting to customer demand is different according to the service contracts. The Jyväskylä operator is able to change the timetable quickly according to his or her wishes; the Pforzheim operator needs to announce any changes half a year in advance, so spontaneous adjustments are impossible. There is also a longer negotiation process than in the previous organisation model, since the operator lost its direct link to the city. Management first needs to convince the PTA, who then addresses the city council; before, they could contact the council directly and would get their suggestions through because of the solid trust relationship that had been built.

Both operators are part of a larger organisation; Veolia is a global player, but Jyväskylä is a national company. Both operators report economics of scale, making

them more efficient. Both companies also report economies of scope, since they are active in several fields—Veolia in other public services and Koiviston Auto in its own bus manufactory.

5.3 Competitive Tendering

5.3.1. Frankfurt

Introduction

Frankfurt has been chosen for its prominent representative of competitive tendering in Germany. The city was targeted to comply with legal settings when it decided to found TraffiQ, an organisational body working as a public transportation authority to ensure working public transportation. TraffiQ would apply the legislation set by the EU and the Hesse state that demanded competition (Berlepsch & Theissen, 2004).

Until the 1990s, vertically integrated public operator Verkehrsgesellschaft Frankfurt (VGF) had been responsible for planning, organising, and providing public transportation in Frankfurt. It was then split off from the administration and joined with other city utility enterprises, such as water and electricity. In 2002, Frankfurt decided to divide functions previously held by the VGF (Berlepsch & Theissen, 2004). TraffiQ took over the responsibility for network planning, timetables, and service planning, plus a part of marketing; consequently, VGF was reduced to a modern-size, operating buses and owning infrastructure. Altogether 33 people maintained their positions but shifted to TraffiQ, which represented nearly half of their new personnel. VGF continued to hold infrastructure, including depots and buses, and operate tram traffic. For operating bsses, VGF bought the company In der City Bus (ICB), for which all their bus drivers work. However, drivers did not transfer from VGF to ICB (Linek, 2006).

TraffiQ is today the public transport authority representing the city as a purchaser. It is responsible for organising the competition, contracting, and ensuring service quality. It provides timetables, does the route planning, and supervises. Finally, it is responsible for communication with the customers and managing their complaints. This kind of big solution of a local public transport authority is unique in Germany (ibid.).

Concerning the timescale for the first competition, VGF admitted to having structures that needed to be reduced (FAZ Online, 3.5.2007) and would stand no chance in winning a competition against private companies; therefore, VGF was given appropriate time for restructuring. For that reason, TraffiQ decided to organise the first competition after 2005, although contracting-in agreements with VGF would all end by 2001 (TraffiQ 3). Since then, there has been at least one competition per year (FAZ Online, 3.5.2007).

TraffiQ decided to split the city network into five parts plus one small one, which is served with minibuses (FRA6). The market is shared today by the public operator ICB and the two international private operators Veolia and Arriva. First, in 2004, a small part of the network changed operators for a Deutsche Bahn daughter. Then in 2005, Part D went to the incumbent ICB. In 2006, Part A went to Alpina, which is now a part of Veolia. Part C was awarded in 2008 to Sippel, which belongs today to Arriva. With the tendering of Part B in 2009, all parts of the network have been competed for at least once (FAZ Online, 13.10.2008). At the moment, both ICB and Alpina/Veolia operate two pieces each, while Sippel/Arriva serves one part of the network (FRA6).

The Actors

Public Transport Authority TraffiQ

The foundation of TraffiQ has had mainly a legal and not an economic background. The Hesse state, of which Frankfurt is the biggest city, formulated a very strict transportation law. Consequently, a body was formed that represents the public interests and coordinates the traffic. The main question was how much TraffiQ is supposed to do—just organise the tendering process or do detailed planning and timetables as well (FRA6). The city decided to give TraffiQ all tasks except operating. Its main responsibility is to organise the tendering and supervise the fulfilment of the contracts. Overall, 68 people are employed, and the annual budget for the organisation itself is €9 million (FRA7).

There has been discussion regarding what would be the right size for TraffiQ. To fulfil the basic tasks of a transportation authority, only a small fraction of the current personnel would be needed. Four people are involved in organising the competition itself and managing the relations with the operators, while the rest are occupied with

other tasks, like computer administration and overhead, with their own managers. The service-planning group has grown immensely compared to the situation before. Marketing is overlapping with VGF (who are responsible for the trams) and partly RMV (as the regional authority). An audit by Metropolitan Consulting concluded that the size of TraffiQ is adequate (FRA2). It is purely speculative that TraffiQ is wasting manpower when taking over new tasks, but it is certainly true that triple marketing is prone to excess, and there is an additional manager that could have been spared before.

Most of the tasks carried out by TraffiQ have been previously covered by the public integrated unit VGF. Many people were transferred from there to the new organisation, so that much of the planning, organising, and marketing expertise could be kept in the city. Consequently, this helped reduce transaction costs.

At the moment, TraffiQ is very strictly bound by politicians, and they demand more freedom and a stronger position when steering the organisation of local public transportation (FRA7). Occasionally, political motives require extra services on very short notice. Then, troubles with the legal timeframe occur, and sometimes even the local dominator ICB does not manage to place an offer due to time constrictions (FRA1).

Operators

The previously integrated public operator VGF and its company ICB stand out as an operator. As a public unit, it does not have to meet profit criteria. It also serves as a reference for private offers received in the tendering process and as a backup in case no other operator is interested. These advantages for the city provide a raison d'être (FRA2). There seems to be no guarantee about its future existence, however. Dissolving ICB is out of the question as long as it wins competitions (FRA6). Another voice says that ICB works as a backup only in theory, but at this point, there was never a situation in which competition was lacking: "At the moment, we have no additional value by the ICB" (FRA1).

ICB admits that its structures have not been efficient in the past. "But if you have politicians instead of experts in management positions, you can't expect them to be as economically thinking. We used to provide not only transportation services but also welfare for our employees." However, the operator wishes this thinking to be reversed so that "Frankfurt would reconsider their strategy" to seek efficiency at the expense of the people (FRA2).

While the VGF is, strictly speaking, not involved in the bus service, it does play a role as keeper of the infrastructure. Another important detail is the fact that the manager for both units is the same person. Before the spin-off, the manager used to be head of the overall public transport authority. This does particularity have an alleged impact, as has been shown in the interviews (Berlepsch, 2011).

The interaction between TraffiQ and other actors of LPT in Frankfurt is very interesting to investigate, most of all because of the relationship between VGF and TraffiQ. VGF lost a part of its organisation and has found itself a subordinate to TraffiQ now, which is a much smaller unit. ICB is considered the "same but different." People working at TraffiQ and VGF used to be colleagues, which makes contacting easy, but one has to be careful when exchanging information. Especially when there have been friendly relations, one has to be careful not to create an unfair advantage of knowledge. One informant provided the following information:

> Somehow the ICB has a hard time reducing themselves into the role of operator. The question of "when do they represent which part of the company?" seems to be difficult for them. As a result, they do things that we (i.e., TraffiQ) should be asked first. However, it is natural for them to think so. Or they initiate things that should not be done by them at all because they grew in that role. The same person I talk to is supposed to play two different roles, and he does not handle them accordingly. Those rules are much clearer with the private operators because they don't know it any differently.

He continued:

> Whether or not the cooperation works well mainly depends on human factors, especially when people have already been working there for a long time. With new people it is less difficult. It can happen that one insists on being the authority but the other one with similar know-how does not like to be bullied. We both exaggerate sometimes. New people play more according to the rules. (FRA1)

TraffiQ's competition coordinator reports that problems culminated when a tendering result had to be settled in court. It was the city proceeding against the city:

> The situation is difficult. Historically speaking, TraffiQ has been founded from the VGF. Problems on a higher level will also affect the collaboration on a lower level. If there were a vacancy in our unit, they would not apply here even if their

> unit has suitable personnel, despite a better salary. There have been critical situations. But our unit is strictly neutral; political issues are not our business here. (FRA1)

For the ICB and VFG manager, it is not easy to give up competences and positions. There seems to be a fight over merits between TraffiQ—which is outspoken about its achievements—and VGF, which claims it could have managed just as well. The question is then how much image loss VGF is suffering, and does it affect its collaboration with TraffiQ? All players acknowledge the problem and label it problematic; however, it is considered normal without any deep impact (FRA2). TraffiQ emphasizes that its relationships with all its operators are good (FRA6).

In Frankfurt, there are two more private operators: Veolia and Arriva, which have bought themselves into the market by taking over the local private enterprises Alpina and Sippel. Both companies describe their relation to other players as really good. Through collaboration, for example, the previous manager who coordinated Part C of the Frankfurt transportation area has left TraffiQ to join Sippel as a controller. He approached the new employer himself after working with him previously. This shows how well the communication and collaboration works (FRA3).

The institutional arrangements

Contracts and standards

As the authority representing the interests of the city, TraffiQ tries to ensure a high-level competition for consultants, which shows its value. A study by Beck (2010) expressed that at least one tender per year would retain the knowledge about tendering procedures, ensure the keeping of the market alive, and motivate the operators to give constantly good results, since previous and on-going performance can play a role in deciding the winner of a competition.

Expanding the duration of the agreements has been on the wish list of all operators; public operator ICB particularly believes in the benefits of long contracts. Increasing the contract duration supposedly helps the operators with their long-term planning regarding resources (FRA2). One milestone is the “natural" lifespan of a bus of approximately 15 years; the closer the arrangement to this time span, the

more efficient it is. Longer contracting periods also lead to a smaller proportion of transaction costs per contract. ICB is openly supporting measures to avoid market-like arrangements, making ICB the strongest advocate to regain a pre-competitive situation (FRA2).

However, the degree of competition is lowered the longer each contract is valid. With six network pieces and the intention of annual competition, contracts cannot be longer than six years. TraffiQ has to give up one of its ideals (FRA2). Initially, the contracts were set up for five years but finally were changed to 6 + 2 as a two-sided option (FRA7), which decreased the level of competition.

By way of discussion, one could argue that it helps to incorporate the life cycle of one bus by allowing a share of older buses into the application. This requires, however, a functioning market for used buses, which is very limited for Frankfurt-style buses. In the case of an operator change, there would be a monopoly on both the seller's and buyer's side, with ideally both parties willing to close the deal but also knowing the other side will end up in big trouble if they fail to do so. There could also be a situation where one side does have other options while the other does not. In this case, the market is known to be highly inefficient in terms of allocative efficiency. The vehicle market is a crucial factor for a functioning competition scenario. However, the market faces de facto limitations. The more specific the configuration of a vehicle, the more difficult it will be to sell it. In the Frankfurt case, the requirement of a third exit door makes finding a match very difficult. In fact, the operators believe it is impossible within Germany; consequently, the market is virtually non-existent.

Incentives are believed to promote quality and various kinds of efficiency and rely on the previously described service-quality assessment. In order to give incentives to the operators, a bonus system has been established in the contracts. In the beginning, there were only fines for not meeting TraffiQ's defined standard quality, which did motivate the operators to meet the standard to avoid financial losses; however, "operators found that undesirable and expressed their wish to include bonuses" (FRA1, FRA3). Thus, the bonus system has been adjusted, as possible bonuses and fines were equalled to five per cent each. This change had a positive psychological effect, with the bonus helping to increase motivation and confidence. In the interviews, operators expressed pride when they had achieved a bonus.

The present system is still not free from flaws. Such a delicate system can cause disputes among the actors. An operator might feel that it was not responsible for the problems. Standards are regarded as very high; they can be punished for things for

which they do not feel responsible, like a missed connection or how the routes are planned. The latter is under the control of TraffiQ. An oddly looking route may result in poor customer satisfaction, which has in return an effect on the bonus system. Another example of this is the frequent failure of the electronic information system in the buses. In this case, all operators were troubled by the same problem, as the only possible supplier delivered poor quality. The issue was settled, but what if only one operator had faced the trouble? Another problem with the punishment system is the waiting time. "It is not fair when we are supposed wait 5 to 10 minutes for a train, and because of that we are considered not on time (+5 minutes)," as one manager put it (FRA4). In order to treat the operators in a fair way, TraffiQ needs to investigate each case of a late bus, which creates extra administrative work.

Despite the problems and the fact that operators "seemingly fall more easily into a fine than receiving a bonus," (Private Sippel) and also due to harsh quality standards (FRA2), one can conclude from this case experience that bonuses apparently improve x-efficiency.

Quality standards are very well developed in Frankfurt because they are included in the bonus system and the cooperative atmosphere between the transport authority and the providers (FRA7). Vehicles need to be especially environmentally friendly. All buses are equipped with video cameras for safety purposes, plus air conditioning and low-entry profiles for wheelchairs and buggies (FAZ Online, 13.10.2008).

In order to assess service quality, buses are registered in an electronic surveillance system where a late or missing bus is visible. Additionally, this system includes a protocol about incidents like an ambulance blocking a road. This protocol helps TraffiQ to find out if a delay is caused by the operator or outside factors and also serves as a basis for extra compensation for driving extra kilometres, such as when the operator needs to take a detour (Private Sippel).

Apart from the objective criteria, there are subjective ones that are assessed using surveys and customer complaints. For example, cleanliness or speaker volume is such an indicator, and these two features are evaluated several times per year. According to ICB manager Rautschka, this basic documentation work is quite laborious, and in a direct-contracting scenario, these could be avoided altogether. TraffiQ might take it too far by "checking if a poster is glued neatly at all four edges," "a logo [is] 5 centimetres displaced," or "a storage spot [is] 2 centimetres too small." Rautschka's question is indeed valid: how far to take the assessment and how much the competitive tendering scenario influences the need to carry out such a task (FRA2).

When thinking of possible factors influencing the difference of this need, a critique of potential exploits and low service quality by an operator is prominent.

This danger lies with both private and public operators. When not assessed, any provider could get "lazy" and ignore standards, resulting in lower x-efficiency. A pro-profit operator may try to improve margins by delivering lower quality. In this case, a private company needs stricter surveillance than a public, non-profit organisation. However, the need for assessment is not influenced by the competition factor. Hence, Rautschka is arguing for the public option of providing services (FRA2).

There are monthly quality reports, which are given to the operators, and at the same time, they report back. We investigate the complaints and see if many accumulate with one particular provider. For example, one line may be delayed very often or one provider may fail to run turns (FRA1).

TraffiQ utilizes the feedback given three times a year by the companies in the regular meetings, and a regular quality check plus a report is made each quarter. In this way, the operators can see how good they were each quarter and how they can improve. Mainly, the companies complain about wanting more generous regulations (FRA1).

However, there should be a discussion about how useful so-called objective criteria are. We have one line that is often delayed because there is a big construction site on the route. That is actually not our fault; we are at a disadvantage because we are delayed, and for that we have had to pay our drivers more as they cannot take their breaks. On one part, our drivers are ranked lower than in another part of the network, even though they are the same, but the users feel that the service quality is worse because the buses are often late. Thus, the results are influenced in a negative way, and for that, we do not get a bonus in this particular case (FRA2).

Uncertainty in planning

When awarding contracts, the purchaser and provider need to predict the future; the longer the prediction, the more speculative it becomes. TraffiQ seems to have difficulties in predicting future demand, while the providers have trouble with fixed prices for an unknown future; "TraffiQ then asks for extra services in peak hours that are connected to higher production costs, but the provider still is bound to the prices they offered, so the operator gets a deficit" (FRA2). On the other hand, TraffiQ looks for price stability and wants to be secure against unfair pricing when ordering extra services. There needs to be some flexibility in the contract to cover uncertainty, so ideally, the whole network has to be reissued every year. Of course, this would make long-term planning impossible and cause huge transaction costs

and organisational troubles. If the purchasers require extra services, they will need to compromise their expectations regarding vehicle quality, which they normally do. Using that strategy, Rautschka and Schäfer argue that one ends up paying more. Using lower-quality buses during peak times is common in cities worldwide, when usually the better vehicles are covering the regular service. It is efficient behaviour if one agrees to trade quality for price, and the extent is simply a definition of preference. Contracts have evolved over the years and have reached a final stage according to TraffiQ (FRA6).

Uncertainty in contracting is an interesting efficiency factor. The accuracy of long-term prediction is limited and therefore challenges efficiency due tof faulty decisions from the past. For example, a service ordered where it is not needed has poor allocative efficiency. Keeping flexibility in the prediction and the arrangements consequently does help to solve the problem. For the operator, however, flexibility lowers productive efficiency by either keeping reserves or scaling effects (FRA6).

Wishes for improvements

The operators desire to be more flexible with vehicles during peak times. The tendering process is fine, and there is no problem with the interpretation of the contracts. Monitoring is fine, even though the operator has a different interpretation of what is a suitable amount than TraffiQ. Monitoring could also be used more as an aid than as a check-up. Information flow could also be improved, so one could react more directly in order to solve any emerging problems (FRA4).

Veolia's manager wishes for more influence, such as making his own timetable, which would help to optimize the use of drivers and buses. On the other hand, there is a danger in lowering service quality when connections to other lines get worse or turns are made in an irregular way. He suggests changing regulations about breaks to the eight-minute rule. If a driver has taken less than an eight-minute break by the end, the break will be paid, lowering productive efficiency. Naturally, the manager does not prefer seven-minute turnarounds. This brings up the question of how much can TraffiQ do to give drivers a better work life, and how much are they willing to pay for it (FRA4)? The decision of salary and working conditions versus financial input repeatedly comes up in the study. Technically, productive efficiency stands against workers' x-efficiency.

TraffiQ gives freedom to plan the bus use. There is more freedom for the use of personnel and vehicles. Bus circulation and personnel use is under the direction of

the operators. A contract with only functional content would be more risky. The purchaser is aware, however, that there is not much incentive for the providers (FRA7).

However, the public operator wonders if TraffiQ keeps efficiency in mind when a vehicle runs only seven minutes per day and if it is necessary to have new buses all the time. It points to an isolated thought process; one orders, and the other delivers, resulting in missed optimisation possibilities. Manager Rautschka notes "I can clearly distinguish trying to get the best for my company ICB." On the other hand, there should be experts in the council reprimanding the activity as economic nonsense (FRA2). This attitude clearly shows a more insulated thinking than before.

Competition and effects

Competition has been a strongly political issue, and to date (2009), trade unions and left parties in Frankfurt refuse competitive tendering (FAZ Online, 13.10.2008). After the famous "Altmark Trans" court decision, contracts can be directly awarded in-house to an "averagely managed" enterprise. However, Frankfurt declined the opportunity, which would have also put pressure on VGF to be average at least (FAZ Online, 4.12.2006). Social Democrats were against Conservatives and Greens in favour of competition. During the election campaign in 2006, both candidates claimed to ensure job security and favoured VGF in the next competition. Should the public operator lose, people working for them would lose their jobs (FAZ Online, 5.6.2006).

TraffiQ decided to divide the city onto five parts plus a small one, which is served with minibuses. The network size is in question, with big companies arguing that a good size is 80 buses, whereas smaller enterprises prefer 15 to 20 buses. Traffic has to decide between the interests of small and big companies (FRA1). Managing a significantly larger number of 20 or more bundles would require much higher manpower.

Tenderings received applications altogether from about 15 different companies over the years, yet the number has diminished. At the moment, the situation can be seen as more of an oligopoly, which is still better than a monopoly. A number of operators have left the local market; some even went bankrupt. Others returned to their duties or were sold to a bigger entity who then had to buy them out from deficit contracts. All those companies have shown extreme growth before. One had to be reissued as tendering. As a record low, only two operators applied for Area B,

suggesting that aggressive market entry is a thing of the past and actors are calculating more cautiously. With only two applications, the competition is losing its character (FAZ6). In fact, it is highly endangered. There is also danger of a future oligopoly or a quasi-monopoly disguised in a tendering process. TraffiQ emphasizes how important a large number of applications is to ensure competition. Anlauf speaks of "everything is possible." This expression is remarkable in conjunction with some confidential information given by ICB (FRA1).

For that reason, TraffiQ held a meeting with 16 operators where they discussed how to improve the tendering documents to get more companies competing. More measures were introduced to keep good relations with the operators and make joining easier. TraffiQ is ready to adjust requirements about vehicles and price indicators. For example, the energy price indicator was changed from annual to semi-annual, which also helps to secure the liquidity of the enterprises. TraffiQ also continuously communicates with the people who operate the line (FRA1).

For the second round of competitions, it turns out that the incumbent wins again, which suggests that there are market-entry barriers. The rather large size of the network plays a role, so no small company can make reasonable offers. Additionally, requiring the newest vehicles is very expensive to the operator and a disadvantage for smaller companies because of worse credit conditions. It proves to be important to own or have access to a depot in the city in order to be competitive (FRA7). On the other hand, Veolia's manager believes that an incumbent has no significant advantage of experience or expertise over competitors (FRA4).

If an attractive market like Frankfurt already has a problem in finding operators, it should be even more difficult for smaller towns. One can also consider this case as a precedent for Germany, making it supposedly even more attractive for companies to enter.

Competition made the costs drop for the city, which is good news for the taxpayers of Frankfurt. There has been a 25% cost reduction compared to the previous contracting-in solution, and as a result, Frankfurt reduced its subsidies for bus transport to zero (FRA7). With the money saved, the service level improved from 12 million km to 14 million km in the first year after starting the tendering. The money has been used to improve service quantity, especially in the early mornings and late evenings, as well as at night for regional traffic. Based upon BSL and KCW studies, competitive tendering has reduced costs in Frankfurt, which serves as an argument for the city to defend the method (FAZ4). However, prices have recently gone up due to energy costs, recovering wages, and increasing demands for environmental attributes (FRA7).

Competition results can be disputed. TraffiQ does not disclose the rankings or how close they were. There is no legal requirement to publish their results, as lawyers recommend keeping them under wraps. An applicant getting second position might feel persuaded to go to court. One operator has already threatened to take legal proceedings and once went before the procurement chamber (FRA1). ICB started legal proceedings against TraffiQ after losing one competition because it got disqualified for formal reasons. It was not clear how ICB got buses from its mother organisation VGF and therefore violated competition rules against hidden subsidies (FRA6): "When we lost Part E here in Frankfurt, our offer was turned down for formal reasons. The court confirmed that we got treated wrongly, yet the decision made by TraffiQ is legal" according to an ICB manager (FRA2).

Competition is not welcomed by everyone, and drivers of the public operator are or were especially against it. There were warning strikes by employees of the public provider in April 2007 as a response of the workers to the news that their company was under constant pressure to improve competitiveness. The employees wanted to put pressure on the politicians to decide in favour for their issues, such as a direct contract for the public operator to avoid competition. The fight breaks down to personnel and wages and work stress. Remarkably, there has been a conservative-green coalition in the city (FAZ1, FRA5):

> We believe competitive tendering is a poor model because you have discontinuities when the operator changes every six years. The specific knowledge of the driver is getting lost. For example, if a particular person hasn't shown up at a certain time, the driver can maybe wait one minute. Also a driver is more likely to help in certain situations when a personal connection with the passengers is established. This is expertise is lost, and it takes a while to get it back. (FRA2)

In fact, the public operator has tried to prevent the tendering for many years. A study invoked by them showed the whole idea of competition to be inefficient because of high transaction costs. A second study by the city revealed the opposite result, so the city politicians needed to know which study was right. A third study finally concluded that it would be profitable to follow the path that had been applied. According to this study, transaction costs could be compensated by creating new business; for example the VGF could offer maintenance services for other competitors as well. However, according to one informant, "finally it was not the reason, but rather politics... the idea was to cut costs also for the public provider and to give them a proper threat" (FRA6). VGF was credited for doing "an amazing job

in getting on a competitive price level" so that it could win competitions with its daughter ICB. Its strength lies in quality service and infrastructure. It profits from an existing depot in the midst of Area B, giving VGF an edge for operating in that area (FAZ Online, 13.10.2008).

As for innovativeness, the hybrid buses of ICB Frankfurt were among the first in Germany. Now in the age of competition, "if I want the cheapest price and have 50 or 60 buses, I cannot count on technical innovations" because it is a financial risk. According to ICB manager Rautschka, the small scale of divided networks prevents innovations like electric or hybrid engines on one's own initiative. This kind of innovation would require reserves in case of a failure. However, efficiency pressure results in the increased use of a vehicle. Nowadays, availability is set to 98%, and reserves are as small as possible. That is a big obstacle for technical innovations because the operator cannot finance them "out of their own pockets" anymore. Such innovative buses cost twice as much as a normal bus, which is a price spoiler (FRA2). However, despite this logic, Veolia is testing new buses on their own account (FRA4). Thus, if the observation describes ICB's management attitude accurately, innovativeness is not discouraged in the case of Veolia, which includes environmental friendliness as part of its business and image strategy.

Concerning transaction costs, tendering also requires some extra work that does not occur when contracting directly (FRA1). Five people out of 70 are involved in it according to their own counts. Transaction costs, including legal advice, comprise €250,000 a year, which is small compared to the total expense of €42 million annually for the bus services (FRA7), quality management, tendering procedure, a lawyer, plus some outsourced services (FRA6). For transaction costs of the competitive tendering, TraffiQ states that about two people are busy half their time with the tenders, so altogether, it requires the manpower of one person to manage the competition. This small amount compared to the size of the service contracts is reduced to a minimum considering that the in-house contracting with VGF takes "nearly as much work" according to Anlauf (FRA1).

For an operator, an application is costly. Transaction costs also include opening and setting up the depot, seeking and hiring drivers, buying buses, and obtaining a manager for the area. All these tasks require effort, especially in the beginning. Later, things run with less of an effort (FRA3). Cost calculations must be planned in a detailed way, down to each single bus and driver. This calculation determines how many buses and drivers are needed, how to identify a suitable depot, and what is a good offer for buying vehicles. However, it is hard to determine how much work is exactly required within a competition. The work must be very precise, since one

mistake can exclude one from the competition. Overall, the effort requires "plenty of hours" (FRA3). Lost applications can make companies stop their efforts after losing several times (FRA1), also indicating that there is some effort involved. On the contrary, the Veolia manager states that working on application documents is very small compared to the overall expenses (FRA4).

Dealing with slack and the urge to abolish it can turn into a problem, as vehicle reserves are kept at a minimum level. For example, when there are big challenges in the Football Championships, it is questionable if the city is able to operate during those times. Sure, there is a chance to rent buses from other cities, but if they all are also running low on reserves, then no one is able to help out anymore. The pubic operator manager believes identity does play a role, and his company is trying harder to support the city in coping with the problems, since a municipal public enterprise as an integral piece of the city behaves differently than an international transport operator (FRA2).

VGF did have transaction costs in the process because drivers refused to change to low-salary contracts with ICB. Instead, VGF needed to find new jobs for the workers and finally retrained most of them as tram drivers (FRA2). Some drivers proved not to be suitable and therefore caused more costs. It can also be considered an x-efficiency problem when workers have to do a job that they did not apply for in the first place. This phenomenon is caused by the change of system and can be clearly seen as part of the transaction costs.

When Veolia won its competition, it had to start a big promotion in order to recruit drivers, even asking in neighbouring towns by printing postcards and stickers and placing advertisements in newspapers. Despite these efforts, it barely managed to get a sufficient workforce, since the job of a driver is not as attractive any more. Also as a result of this, Veolia had to subcontract half of the service to the public operator. However, Veolia does not regard it as an emergency solution but had been considering the option very early on, as VGF's depot lies optimally within (FRA4).

Cooperation between the operators is one way to solve the difficulties occurring in a change of providers. When ICB lost a tender in 2009, the winner Alpina had the task of finding 80 new drivers within a short time. This reveals one big problem in this competition model; one can only manage a smooth change when the winner is coordinating with the incumbent. When Sippel won the tendering of area C, it subcontacted the losing public operator in time because it speculated there would be layoffs, but there were none. All drivers were re-educated for light rail. For a smooth transition, service was taken over bit by bit as early as April 2008 (the official start was September 2008), so Sippel did not need to start from one day to another with

40 vehicles and 90 drivers (FRA3). Finding drivers in such a short time is very challenging, especially when thinking of internal education. ICB agreed to reduce its service gradually in order to provide a smooth start for the private contract winner. As a loser, it would be very difficult for a company to sign people for half a year only (FRA2).

Alpina offered 50% of its service to ICB as a subcontractor because it would not have managed by itself without support (FRA2). In Area B, the buses of Sippel are located in the courtyard of the public operator, which also takes care of their maintenance. Sippel is happy with the quality but complains about the costs (FRA3). However, the public maintenance unit claims that the vehicles from Volvo are of poor quality and therefore require extra maintenance. It is important that depot space be used because those areas are rare in Frankfurt; others who have tried to raise something from scratch have failed. ICB is also glad to keep the jobs in the repair shop (FRA2).

There is another outsourcing situation in the east of Frankfurt because there is another depot that is closer. The company is called Main Mobil, and it is the corporation between VGF and the transport company of the neighbouring town, Offenbach. Reasons for this are historic and date back to when Frankfurt was enlarged in 1977. The local provider Alpina already had all the infrastructure in place. Thus, Alpina continued the service as subcontractors, which worked well. The collaboration is efficient, so therefore it is maintained (FRA2).

Economics of scale on the operator level are disputed. Veolia's manager has not noticed it by now, but the whole network needed to be put into one tendering for scaled economics to occur. Since it is an international and large company, it has the benefit of being able to employ expert lawyers if needed (FRA4). The Sippel manager notes that the financing of new buses would make it very difficult to get competitive conditions from a bank for a loan to buy 40 new vehicles. In this context, Sippel enjoys being part of a bigger company (FRA3).

Effects on personnel

Competition has an effect on drivers. Jobs are limited in time, and personnel will regard work from a different angle than with unlimited contracts. The long-term perspective in a company plays a role: "If you offer a job for the next 30 years, then the personnel will regard the job from a different angle. We see in our unit that we

still have many drivers who are working for us after many years. There is a different emotional connection to the company, and this is getting lost." (FRA2) This trend is not related to the lower salary, since the same salary remained after introducing the ideas of the private organisation at ICB. The management has noticed that as people change professions, there seems to be a loss in trust on the job and in the sector. When one gets affected several times by such a change, one might as well change jobs, which means a big loss in human capital (FRA2).

Working contracts can be limited to a maximum of two years, but not any longer, then the contract must be unlimited. Thus, it is not possible to offer a job just for the concession time of five years. However, according to the manager, bus drivers will be a sought as a profession in the future so that there is no concern about them. Alpina would offer a job in-house, in case they lose their concession. One must bear in mind that this works only for larger companies, while small enterprises cannot deal with such fluctuations (FRA4).

In ICB, a large number of drivers work for many years, and they have a different emotional connection to the company. This connection is getting lost; while the change is explicitly not related to the lower salary, as we can see, we have the same salary, since we introduced private organisation ideas at ICB (FRA2). Generally, the manager observes a lack of soft skills. One reason is as follows:

> Also schooling has been cut. In earlier times, the driver has been perfect before he even started his first load, knowing each route in the city. Now people with a just driving licence are taken and after only two weeks of training with just the minimum necessary knowledge they are sent to work instead of over half a year like it was previously. Certainly that causes a little bit of insecurity in the beginning for the drivers. However, according to the ICB management they do not make more mistakes than before (FRA2).

Competition is clearly held on the back of the drivers (FRA2). The drivers' profession has become less and less attractive in recent years. They receive lower salaries and work more than previously. The job has become so unattractive that driver demand has exceeded the number of existing jobs. For that reason, the state supported unemployed people becoming bus drivers by paying 4500 euros for the licence. Mostly immigrants benefitted from this programme.

Now, TraffiQ insists on minimum wages, which is a good thing, as public organisations shall not support wage dumping (FAZ Online, 13.10.2008). Within

the public operator, people change professions more easily than before the competition. (FRA2).

Regarding incentives or gratifications, drivers once got free electricity from the city and free tickets to the zoo as city employees. Now, they even have to pay for their own tickets when using public transportation to get to work. Extra social and health care benefits have been cut. They start their jobs on the bus instead of when they enter the building, which reduces their hourly wage (FRA5). Pressure from competition has cut special extracts. One finds the same among competitors (FRA4).

When trying to improve efficiency, it is important to notice that salaries constitute about 50% of the costs. Therefore, the question is how much can be gained exclusively from a more efficient organisation? According to ICB manager Rautschka, cost reductions have been mainly accomplished by cutting salaries (FRA2). The consequent low job attractiveness led to a lack of drivers for the operators Alpina, ICB, and Mainmobil after Alpina won the first tendering in 2007. Alpina planned to rent drivers for a 7.62 euros salary instead of the regular 10.84 euros per hour, which has been agreed upon by the Association of Regional Bus Enterprises (Verband Hessischer Omnibusunternehmen). After protesting at trade unions and publicly, the company stepped down from the idea. Although the city supports minimum wages, it cannot legally enforce this practice. In the end, even the loan workers for 7.62 euros are working for a legal and negotiated tariff (FAZ Online, 3.5.2007).

Personnel have higher stress, as they are being given more responsibility but less money. Breaks are not paid anymore. Some have to take an extra job. There is 25% more work but a 20% to 30% lower salary than before. Workplan efficiency has increased from 50% to 80%, meaning the individual works much more during the time he is paid. While this represents an increase in productive efficiency, it also puts much more stress on the driver. Older drivers will be unable to find a job anywhere else. Among the personnel, there has been a difficult situation between ICB and VGF drivers, including accusations of taking jobs away and envy about salaries. All this leads to a bad working environment and climate (FRA5).

The relation between workers and management has also become increasingly difficult, with the workers feeling that they are treated like "inherited problems." The drivers' representatives have the impression that the city cuts costs and disregards the impacts of these reductions; it does not care how savings are made (FRA5). Also drivers become alienated because they are now subject to observation and scrutiny since the control system changed from internal to external with TraffiQ. The same

notion is supported by Sippel; its manager said that observation should be more a help than a surveillance (FRA3).

5.3.2. Helsinki

Introduction

Helsinki represents the competition case in Finland. During the 1990s, the city decided to implement competitive tendering because it thought the previous concession model was too expensive. The city implemented the change in a synchronized manner, together with Espoo, Vantaa, and Kauniainen. Helsinki created the Helsinki city transport authority HKL, and for the other municipalities in the region, the transport authority was named YTV. In a further restructuring, HKL and YTV have been merged into Helsingin Seutuliikenne (HSL: Sinisalo, 2007). HKL still exists, although it is responsible only for tram and metro services. HSL is today the public transport authority that represents the city as a purchaser. It is responsible for organising the competition, contracting, and ensuring service quality. It provides the timetables, plans the routes, and supervises. Finally, it is responsible for communication with customers and managing complaints. The operators are mere carriers that only influence quality and internal planning (Lahdenranta, 2000).

In the previous concession model, various public and private operators all enjoyed a quasi-monopoly environment. All operators were given several years for restructuring before they had to face the competition. Restructuring resulted in the privatization of Vantaa's public operator, while Helsinki decided to give its public operator more autonomy. Nowadays, the market is operated by seven companies whose market share is constantly changing. There are three main operators: the public Helsingin Bussiliikkenne (HELB) and two private international companies Veolia and Nobina. Additionally, there are four mid- and small-sized firms. The city decided to split the network into small entities, bundling just a few lines together. The result is a rather fragmented net (see Chapter 4.3).

Differences between public and private enterprises have disappeared so that their ways of managing and operating are very similar. The organisation structure within the city is clear-cut, and the public operator has exactly the same standing as the

private ones from the point-of-view of the HSL public transportation authority, with no internal special-power relation (HEL2, HEL3).

Market dynamics have been remarkable in Helsinki. Since the market opened, the companies have heavily competed for the services, resulting in frequent changes of operators. Two reasons produced this phenomenon: the changing winners of a tendering process and the numerous takeovers by private companies entering the market. When the competition started, prices went down significantly by 25% to 30% (Sinisalo, 2007). Then, when one company lost its market share, it tried to re-enter the market with even lower prices because it still had to cover indirect costs like owning a depot and buses. Thus, prices dropped even more in the following 10 years and, as a result, most companies have been losing money, leading to even more mergers and takeovers (HEL2). The overall economic situation of all operators is quite tense (Valkama & Kankanpää, 2008).

The Actors

The HSL (Helsingin Seutuliikkenne) Public Transport Authority

As of 2012, the restructuring process resulted in a unified transportation authority, HSL, which organises both the local and the regional bus transport in Helsinki. HSL evolved in 2010 from the merger of the regional unit YTV and the local HKL because competence would overlap, and the same work would be done twice. While YTV controlled the areas of Helsinki, Espoo, and Vantaa, now other relevant municipalities like Porvoo are going to be integrated as well. Before the founding of HSL, the traffic had been planned twice by different units and was therefore inefficient. There were some examples of redundant services because of the uncoordinated double planning. As the structure is new, it takes time to observe the effects. The hope is an efficiency gain by getting all responsibilities under one roof. This way, the structure should also be ready for future planning and administrative extensions like the projected integration of the larger Helsinki region. Helsinki strives to offer a holistic traffic-planning approach to the metropolitan region, including all modes of transportation (HEL2).

In its effort to control the competition, HSL is very conscious about not giving the city-owned operator any advantage and treating everyone equally instead. According to HSL Manager Sinisalo, from the city's perspective, it is an advantage

to keep HELB so that there will be a secured entry for each tendering. Furthermore, keeping HELB is a way to control the prices and the market, as the price calculation is open to the city. This helps the city to compare the prices and ensure the price level is not too high (HEL2).

Operators

Public Operator Helsinki Bussiliikkenne (HELB)

Helsinki decided to keep its operator and make it a player in the competition. However, it produces deficits permanently and would be bankrupt if it had not had the financial backup of the city. For example, in 2011 it has been subsidized by an average of one million euros per month. Reasons for this deficit are a result of certain disadvantages that come with being public. As HELB Manager Hakavuori states, disadvantages include when the company buys services it must offer by tendering; since these tenderings are binding, management cannot influence the results anymore. In a private company, it would be normal to start negotiating the details after receiving, for example, multiple offers when buying 20 buses. He continues that being public puts Helsinki into the focus of negative public opinion like the newspapers, even if private companies share the same problems. As a public company, it takes more time to apply changes because of administrative structures and the need to obey special laws. Although the management feels as though it is treated no differently by HSL than its competitors, it regards being public as a strategic operational disadvantage (HEL3).

When discussing the position of HELB in relation to other providers, HSL emphasizes not recognising any difference between public HELB and private operators. According to Sinisalo's experience, their behaviour and treatment are the same. The city is influencing the market by supporting its own company. HELB proves its value through its impact on price regulation and monitoring; therefore, its existence is guaranteed for the moment (HEL2, HEL3). Opposing this view, Veolia's manager Vihavainen regards the existence of the public operator "not very satisfying" because it wins competitions with unrealistic offers (HEL4). The fact that Helsinki does not publish the results does create speculations, discussions, and a bad atmosphere.

Private Operators

Notable private operators include Pohjola, Westendin Liikenne, Concordia/Nobina, and Veolia. Out of these private operators, Veolia was willing to participate in this study. Veolia's development is a reflection of the situation in the Helsinki region during the last two decades. Its origin can be found in Vantaa, which sold its city-owned company Vantaa Liikenne in 1994 to the private Swedish company Linjebus and Connex, which finally ended up in Veolia. One interesting aspect is the fact that the manager remained in this case. Former Vantaa Liikenne manager Lahdenranta experienced the shift from public to private within the same company. According to his experience, private organisations are able to make changes more easily and quickly than public units. A public enterprise is much more subject to the influence of its representatives, which limits managerial freedom; private companies are, of course, more business-oriented. The strong side of public enterprise is openness and responsiveness. However, he concludes that the difference between the two ownership options has significantly diminished (HEL1). Apparently, the idea was to keep knowledge within the organisation, and management was not seen as the cause of the inefficiency but rather structural problems. Current Veolia manager Vihavainen thinks that decision-making is easier and quicker in a private company, a fact that still applies in a bigger company. Veolia had losses of 3.7 million euros in 2009 but improved and managed to create a small profit in 2011. Profitability improved through the use of longer contracts and scale economics with the central unit in Paris (HEL4).

Workers

Employees of the public operator experienced a number of changes related to the reforms. Work time calculation has been changed so that breaks are not paid any longer, and often these breaks are not even taken in the depot anymore. This means drivers put in more work per salary and experience a lower chance to build social interaction with their colleagues. As a result, there is less communication and a loss of team spirit. Team spirit is also harmed by the fact that different nationalities form exclusive groups, which is more a question of language skills than culture. Work time models used to be flexible; and employees could choose from one out of three alternatives, but the decision is now made by the company. Also, increased flexibility is demanded by the employer; drivers must be available both on a short-term basis

as well as on holidays, which are now confirmed only three weeks ahead of time. Increased flexibility also counts for the routes, which causes the loss of personal contact with the customer and makes it more difficult to solve issues. Since the routes change several times per shift, it sometimes leads to mistakes, such as taking a wrong way (HEL5).

The contracts are the same for each employee; only after ten years do they get a bonus. On the positive side, the drivers now can opt for one out of four depots closest to their home and always begin and end their shift there. One difference between working for a public versus a private company is that the public company only charges five days for one week of holiday, whereas the private one would charge six (HEL5).

Users

Customers do not have an organised body where ideas and complaints are collected. Instead, they can complain either directly to the company or to HSL. Customers' interests are represented solely by the transportation authority HSL, which manages customer feedback. Additionally, the customer's voice is heard via a satisfaction evaluation, which has generally remained high overall compared with other cities and also internationally. On the positive side, the overall service increased, and prices remained low. However, the quality trend has been declining recently as the operators' cost cutting has left its mark. Service performance is challenged by the drivers' limited language ability and primarily by poor fleet maintenance (Sinisalo, 2007). HSL tries to ensure service quality by emphasizing incentives for operators in the contract. More detailed information about the incentive question is provided in the contract section.

Institutional Arrangements

The contract between the public authority HSL and the operators stipulates that the city receives all ticket revenues. The operator states the service costs per unit, upon which the tendering authority then calculates the total costs. Factors influencing the calculation are costs per kilometre, per hour, and per vehicle day. While HSL does all the planning, including the routes, timetables, and fleet schedules, the sole purpose

of the operator is planning the bus service provisions, including working shifts and vehicle use (HEL2).

Contract duration has increased over time. From an initial three years in the first tendering (ibid.), contracts now last seven years plus a two-sided option of three years. Both the local transport authority and the operators favour the adoption of even longer contracts. According to Veolia Manager Vihavainen, better long-term planning and reduced transaction costs are the main arguments for this development. The optional extension, however, creates some uncertainty for the operator. For example, instead of planning ahead, Veolia would prefer a guarantee for the continuation of the service in case the operator fulfilled all contract requirements thoroughly (HEL4).

The contract volumes are to some extent flexible, and the purchaser HSL may change the amount by up to 20% over the contract period, while the price per-unit remains. However, the amount of service influences efficiency through positive economics of scale. For example, HELB manager Hakavuori believes that reducing the volume increases the costs per unit and therefore influences profitability in a negative way. Above that, uncertainty reduces predictability and therefore challenges planning. So far, the volume of service has usually been rather extended and not reduced, thanks to the increasing number of passengers; as a result, this point has not yet caused a negative effect (HEL3).

The contracts include a compensation system for the services provided, which tries to reflect the change in real production costs through a price index. In this index, gasoline prices have the greatest influence on the variations. The cost index is applied with a three-month delay, causing dispute about its fairness. The delay can accumulate significant sums, and HELB manager Hakavuori claims that in the case of his company, the difference between real-time expenses and the late adjustment resulted in €1 million in 2008. This problem has been acknowledged, and new contracts include a one-month delay only (HEL3). For Veolia manager Vihavainen, this is still not enough. In his opinion, the steep fuel-price increases in the winter cost his company a large amount of money, so he prefers the index to be in real-time (HEL4). The fact that this adjustment is so important to the operators shows how much their profit is limited. The cost-index factor should be levelled out through the year when fuel prices go down in the spring. Assuming a long-term rise in fuel prices, however, there would be a net loss for the operators. Another problem with the index regulation is with the salaries, which are regulated and indexed as well in the contract. Contracts use the national average for salaries, ignoring the fact that

living costs and salaries in the capital are higher in Helsinki. About 60% of the total costs consist of salaries (HEL3).

Specifications for the buses are very precise, going as far as to predefine the layout of windows and the number of doors. As a result, it is difficult to trade buses with other cities. Some bigger international companies like Nobina do have an advantage because they operate similar vehicles in Sweden, which they can transfer. As a side effect, fewer restrictions would also mean more competition on the producer's side and lower vehicle acquisition prices, as HELB manager Hakavuori pointed out (HEL3). Other issues include the inflexibility and strict demand for three-axle buses at certain times, despite the lack of demand. The operator wants to be flexible in order to save unnecessary costs and would provide the opportunity to do maintenance on the heavy-duty, three-axle buses during normal work hours, as pointed out by Veolia's Manager Vihavainen (HEL4).

Quality assessment is done by public authority HSL in the form of a personal check up on the buses and regular passenger evaluations. Results are given in the form of ratings; in case of good results, a bonus is possible (HSL). In regards to the punctuality criteria, HELB manager Hakavuori believes "[our] quality is improving all the time, and we do get the bonuses. The assessment is reasonably fair and done on an individual basis. If a delay is not our fault, there is no punishment, [such as] last winter when the roads were blocked" (HEL3). A slightly different opinion can be heard by Veolia Manager Vihavainen: "On the other hand, the customer satisfaction survey was done when the conditions were worse, which therefore influenced the opinions. It would be preferable to emphasise the number of service failures, like when a turn is not driven at all" (HEL4). This argument is shared by HSL, which believes that current contract regulations are not good enough to motivate the operators to solve service disruptions to the passengers' satisfaction (HSL). One rather dissatisfying point in the quality assessment from the perspective of HSL has been the condition of the vehicles. Age limits prove to be of little use here, but maintenance is vital; five-year-old buses can already be in poor shape if proper maintenance is neglected. HSL Manager Sinisalo suggests considering previous performances by the same operator when deciding on competition winners. Apart from this, monetary incentives could be strengthened (HEL2).

At the moment, HSL as the purchasing authority is considering reforming the contract in order to improve incentives. Presently, only 1% of the contract volume is based on incentives, so operators are willing to compromise quality for profit. Current incentives do not sufficiently encourage the upkeep of the fleet or ensure good customer service. As HSL Manager Sinisalo puts it, "The carrot is not tasty

enough, and the system is neither fair nor transparent." In case of a problem, the operator would not react properly in the interest of the customer. So for now, some drivers' inability to communicate because of language barrier is regarded as a serious issue, including the poor vehicle conditions despite their young age (HEL2).

HSL has identified four ways to create better and more powerful incentives: First, let the previous performance influence the decision about winning a new contract. Second, improve the acceptance of incentives by tying them more clearly to quality measures. Third, conduct quality assessments using both objective and customer-based criteria. Finally, utilize demand-based monetary incentives so a greater number of passengers would affect the revenue of the operator. However, this last point was attempted unsuccessfully with airport buses in 2002, when a recession and the drop in demand made it impossible to reach the incentive targets. Introducing revenue incentives would work better with the concession-area type of contract, but there would be a danger of ending up with the same problem of local quasi-monopolies like Helsinki had before introducing the competition. Also, it is inefficient if two companies try to obtain the same customer (HEL2).

Competition

The first tender was awarded in June 1994 and began operating on January 1, 1995. During the following years, all regional transport services managed by YTV were competed. The region has been split into service bundles of different sizes. The contracts for the services awarded under the first tender were for three years with an option to extend them by one or two years. Costs per kilometre are most influential when deciding who is winning the competition, (YTV2001b).

Reasons for the competition were numerous. Apart from the perceived inefficiency of the public operator, there was a need to coordinate the various companies in the Helsinki area, as each one used to have its own fare system. Thus, one target was coordinating and integrating the service into one, which would be more customer-friendly. Furthermore, companies were making excessively high profit margins on their monopoly licences at the expense of the city, which paid the subsidies. For example, Vantaa's operator Vantaa Liikkenne (VL) was among the 20 most-profitable enterprises in the country. While the money gained from HELB and VL was returned to the city, the private margins were a loss to the public. As a result, the city of Helsinki was very eager to put public bus transportation to competition when it was made possible (HEL1).

After the introduction of competition in 1994, the costs of YTV bus services fell sharply during the first rounds of tendering by over 30% at most. As a result, profit margins for all operating companies fell drastically to a point where all of them suffered from heavy losses during the late 1990s (Sinisalo, 2007). When one company lost its market share, it tried to re-enter the market with even lower prices because it still had to cover fixed costs like owning a depot and buses. Consequently, prices dropped even more in the following years, and the competition remains intense. One effect of negative margins has been that many companies have been changing their owners. While some companies are still losing money, others have been able to cut costs enough to squeeze into the profit zone, while the prices have been slowly rising again. In 2006, the cost level was still about 20% lower than before tendering, indicating significant long-term benefits for the authorities. The cost savings made it possible to reduce ticket prices and increase service provisions, and the travel volume in regional transport grew by 40% between 1995 and 2002 (Sinisalo, 2007; Valkama & Kankanpää, 2008).

Sources for price reduction have been found at many levels, as HELB manager Hakavuori points out. Reducing overhead, minimizing reserves, and optimizing detailed planning are prominent. In the case of Helsinki city transport, personnel were also reduced in the administration and workshops. Sometimes, outsourcing can be an option, but it is not considered very popular (HEL3). Outsourcing and other kinds of collaboration to optimize efficiency are utilized. Trading some shifts or lines has been done, especially in times when too few drivers were on the market. Veolia, for example, has a subcontract with Westendin Liikkenne with routes that are near its depot in order to maximize productive efficiency (HEL4). Veolia and Nobina are sharing some depots and dividing the costs. However, this kind of cooperation is not carried out by public operator HELB at the moment (HEL3; HEL4). The key to a good competition is the availability of a depot, but places in Helsinki are scarce. To solve this issue, HSL should make sure it is open to new competitors, and this would also mean that HELB would have to open its facilities as well (HEL2).

Regarding the selection of the competition winner, Veolia's manager wishes to consider how the whole company is performing environmentally. Naturally, he speculates having an edge with his company. Another advantage is the wide scope of the company so it would be able to handle all transport in a city. Interestingly, he offers an argument for integrated monopolistic service. He claims that coordination in problem situations can be handled more quickly and completely. He also suggests cutting the area into sectors, of which each one would have exclusive rights (HEL4).

Competition does have an influence on scale economics. When the network is divided, for example, orders for vehicles are smaller, leading to higher unit prices. In fact, an order of 30 buses is much more expensive compared to an order of 300. On the other hand, when companies are part of a bigger enterprise, they can place bigger orders. As Vantaa's operator and former manager Lahdenranta reports, acquiring buses was a lot cheaper for them after Linjebus took over, as they could order larger quantities (HEL1).

One particular problem in Helsinki has been to find a sufficient number of suitable personnel. Starting around the year 2000 and peaking in 2008, it has been very difficult to recruit drivers. For example, HELB Manager Hakavuori names a good economy and low unemployment rates as primary reasons. However, these factors can cause a lack of workforce only if other jobs are more attractive, which indicates that being a bus driver is not an attractive job anymore: "Recognition is rather poor; being a bus driver has the image of low-salaried hard work with long hours" (HEL3). Because of this bad reputation, only certain people are willing to apply, which affects customer service. However, the job is not poorly paid at all; a driver earns around €2600 per month with each employer. The interest in bus driving declined when the competition started because employees were afraid to lose their job, and this uncertainty remains until today. Another reason for reduced job attractiveness is the increasing violence, even towards the drivers. In order to compensate for this problem, a programme was initiated when the companies received public money in order to educate new drivers (ibid.). Another measurement has been to recruit foreign drivers, mainly from Estonia and Russia. By now, half of the drivers in HSL are foreigners. Veolia Manager Vihavainen suggests the engagement of part-time workers, but so far, the idea has been blocked by the labour unions (HEL4).

Language proficiency has become a problem when bus drivers are foreign nationals. Even though language proficiency is a requirement in the working contract, drivers often experience a problem but are unable to adequately explain themselves when they call the central unit according to Hakavuori. Thus, the route is not driven, requiring extra efforts to fix the problem and leading to hidden internal costs hidden. Also, social dynamics have changed due to the presence of multi-nationality amongst drivers, as the different nationalities tend to stick together, forming exclusive groups. Driver spokesman Virala believes language skills would help in this context because people who are good in speaking the Finnish language reportedly blend in much better (HEL5). For a solution, the company engaged two language teachers (HEL3), but social interaction also decreased for another reason.

Tightening work conditions for the personnel resulted in driver breaks being taken on the service instead of in the depot. The result is a less social atmosphere among colleagues (ibid.).

Competitive tendering has influenced the workers' position. Operator changes have made drivers transfer from one company to another, causing them to lose special benefits they previously enjoyed. Following a large strike in February 1998, the so-called Lonka agreement was set up between the employer and employee organisations in order to secure employment benefits when employees are shifting from one provider to another. Despite this effort, competitive tendering has caused uncertainty in the sector; as a result, some drivers have left the transportation sector looking for jobs elsewhere. On the positive side, competitive tendering is credited for indirectly increasing the amount of bus services by over 10% and has resulted in 250 more jobs in the sector. Experience indicates that problems with personnel are connected to short-term fluctuations in the demand for bus drivers at the moment when a company loses a tender and the winner has not become active in looking for new personnel (Haatainen, 2003).

The job environment of the workers also has changed. The drivers' occupation is considered much less attractive than before because of various reasons. The job is considered more stressful; there is less interaction with colleagues, and one feels more lonely and isolated on the job. Financial stability is gone with the uncertainty of the employer's ability to win a competition. Finally, the work has become more dangerous. While the crime rate is not a variable in this context, all other issues are connected to competitive tendering. Employers expect higher flexibility from the workers, while they are less flexible at the same time. Work time models are now very much defined by the company with little to choose from as before. Planning one's holidays is much more difficult, as a whole year of planning can only be determined three weeks in advance, which is a problem particularly before big holidays. Another major change for public workers was that Saturdays count as workdays now when taking holidays. Additionally, drivers are working on several lines as a result of the optimization process of work schedules. This change has consequences for route knowledge, so it is possible for a driver to accidently take a wrong turn. Also, the connection with the passengers is less personal than before, when the driver and passengers knew each other. Finally, the drivers are more alone, and it takes longer to react because of little reserves when a problem during service occurs, as Virala reports (HEL5).

Reflecting on competition influencing the labour conditions, HELB Manager Hakavuori believes it enabled cutting down personnel and keeping salaries on a lower

level, as he points out that an excessive amount of staff is costly and without competition "workers' unions would demand more and more salary." However, HELB raised their salaries to a competitive level in 2011. He only fears for the number of competitors; "there is not enough breathing space for everyone," as he puts it. The network does not support the current eight operators, so as a consequence, prices are down too low and consolidation is needed. In regards to transaction costs, he says that the application procedure for competitive tendering keeps two or three people busy for about two months. Compared to the entire volume of the contract, it is not much (HEL3). One important effect of the competition was that the influence of labour unions decreased significantly. It also changed the attitude towards work, so people understand that hard work is also done in public enterprises (HEL1).

For HSL Manager Sinisalo, competitive tendering in combination with a gross cost contract evidently produces the lowest cost per kilometre. However, the bigger picture needs to include planning design and quality, which are crucial when attracting passengers. For efficiency attributes of transportation planning, he argues that integrating different modes into one system and supplementing services instead of making them compete is decisive. For the same reason, the same area should be planned by one authority exclusively (HEL2).

5.3.3. Comparison of competitive tendering (Fig. 10)

Issue	Frankfurt	Helsinki
Organisation mode	Competitive tendering	Competitive tendering
Background motivation	Legal compliance	Economic free will
Background situation	Integrated public operator	Several concessions: public and private
City influence	High	High
Operators	3 (1 public)	8 (1 public)
Market dynamics	Low	High
Profitability	Low	Very low
Contract duration	5 -> 6+2 years	3 -> 5+2 years / 7+3
Contract flexibility	Renegotiations only	Yes
Incentives	+/- 5% of contract volume	1% of contract volume
Network fragmentation	5 areas	>20
Workers' issues	Loss of income, benefits, job safety reputation, social contact	All the same + integration, language
Transaction costs	Restructuring, court case, worker search, tenderings	Set up, worker search, tenderings

For the background, Frankfurt had an integrated public unit (VGF) that also was doing the planning and held the infrastructure. Thus, there had to be structural change, which involved transaction costs, so that the economic outcome was questionable. Transaction costs include finding new jobs and re-schooling the drivers, loss of infrastructure, and disbanding of a unit. The stock of drivers had to be rebuilt, and a new transportation authority (TraffiQ) has been invoked. Correspondingly, Helsinki founded YTV and HSL in order to improve its overall planning and obtain a holistic transportation approach. Both cities had to found the coordinating transportation authority, but whereas the knowledge to do so already existed in Frankfurt, Helsinki had to create its own expertise in the process. Frankfurt tried to keep its transaction costs low by transferring personnel to the new unit, which worked successfully at the workers' level. However, at the management level, historic structures caused friction in work procedures. It is a trade-off between utilizing existing expertise and clear power relations. Such problems are unknown to Helsinki and clearly point to the creation history of the transportation authorities. Generally, for both cities, creating the administrative structure to have a competitive tendering included significant one-time transaction costs. However, in Helsinki, the two public operators kept their structures and therefore did not cause transaction costs.

In Frankfurt, two new entries have conquered the market, taking shares from the remaining public operator. Both private companies that have been taken over by large international companies have been local. With only three providers sharing the market and the incumbent winning the new tenders, the market dynamics are low. If one excludes collusion and coincidence, one can conclude that market barriers appear to be high. In comparison, the market in Helsinki is highly competitive, with eight providers altogether. The big players were also previously locals that had been sold to international companies. Ownership changes rather frequently, and the winners are changing, which all indicate high dynamics in the market. Dynamics in the market mean that the market is actually functioning.

It is interesting to further investigate why the Frankfurt market is seemingly more closed than the Helsinki market. Both should be attractive on the same level by size, and Frankfurt even offers better profit margins. Although the German city is actively trying to invite as much competition as possible, the outcome is sometimes as low

as two applications, endangering the functioning of a market. However, the Helsinki market is dysfunctional as well. Extremely tough competition has led to vast deficits for the companies. The competition produced a struggle for survival, creating life-threatening financial situations for all operators. Both markets do not work properly, albeit with different symptoms and for different reasons. Access to infrastructure is essential for market entry. In both cities, providers do share their depots and collaborate via subcontracts, so this cannot be a limiting factor. One difference in both cities was the number of existing operators in the beginning, , so it might be that the companies in Helsinki were initially fighting in a struggle for survival, whereas in Frankfurt, the competition has been less a question of survival. One consequence of the struggle for market shares in Helsinki was heavy losses and nearly bankrupt companies, while the rather-limited competition in Frankfurt allows operators to work within their limits. This raises the question of to what degree competition is "healthy" and when negative effects exceed the positive ones.

In detail, the price paid by the city dropped heavily in the beginning of the competition, so one can argue a benefit for public finances and higher allocative efficiency. Helsinki paid approximately 30% less per kilometre and Frankfurt likewise 25% less after the first tenders. In both cities, the costs began to rise a bit after the initial drop. There are two reasons for this change: an aggressive market-entry situation when a provider offers a below-production price in order to enter the market, and the labour costs for the drivers, which first decreased sharply and then increased again. Efficiency gains have been achieved on all management levels, like reducing overhead, cutting reserves (slack), and work-plan optimization from the employer's perspective.

To a large extent, the productive efficiency improved at the drivers' expense because their salary is a crucial component of the overall costs for producing bus-transportation services, especially in cities. When the competition started, salaries were cut as much as 30%, and working conditions were becoming harder as individual productivity was increased. As a consequence, drivers were losing interest in the job to the point that they became a scarce resource. Strikes, labour unions, and a push from the city authority helped the salary to recover parallel to the competition's prices. When changing employers, drivers in both case cities now retained some of their privileges like retirement bonuses, so the competition therefore had fewer negative effects on the drivers. However, bonuses have been reduced significantly, especially for new drivers.

As a side effect of driver scarcity, money was used in the form of transaction costs in both cities. Educated drivers changed professions, and new, uneducated

people had to be instructed to get a bus driver's licence. There were search costs, and applicants with less-suitable attributes had to be taken in. Service quality was reduced due to language problems (especially in Helsinki) and variations in individual competence. Education programmes supported by public finances helped to cover the recruitment problems in both countries but added to the transaction costs. Helsinki operators took in a number of immigrants and tried to integrate them with language lessons. The image and reputation of a bus driver deteriorated in both cities, likely as a consequence of the working conditions and the workforce configuration, which only added to the problem. The public transportation authority is indirectly able to support workers' interest if they demand a certain salary level from the contractors and also through the use of timetable planning. If a break on the bus exceeds a certain time range, it is unpaid. By keeping the turnaround times under this threshold, the transportation authority can ensure a break as part of the paid-labour time for the drivers.

Aside from the competition effect regulating the prices, both markets also have the public operator as a price-regulating instrument. This is important, especially in Frankfurt where competition is limited, as prices might increase to a monopoly level without it. In Helsinki, this special function is not needed at the moment, but its potential is still appreciated by the city. Additionally, the public operator can serve as a backup to ensure a service by obligation in case a tender is not attractive for the providers.

When comparing the interaction and cooperation between the actors, it is noteworthy that in both cases, subcontracting to each other is allowed. These collaborations can have different backgrounds, such as sharing infrastructure when a depot is situated well for another operator. However, this is not always done, as in the HELB case; depots are a market-entry barrier. Secondly, single lines can be subcontracted when the other operator's infrastructure is located in a better area. This collaboration is a classic win-win situation and can be found in either town. Finally, in Frankfurt, the private operators managed to get a smooth start when ICB agreed to gradually shift its service to another provider. ICB also took over a large part of a network won by an opponent when it became clear that it would be impossible to get enough drivers in time, producing an optimal result for the city. This kind of cooperation is not as widespread in Helsinki, where competition is harder.

The relation between the organising body and the operator seems to be unproblematic in Helsinki, independent of the operator. This distinction is apparently different in Frankfurt, where the public operator is managed by the

former head of public transport, and the role is seemingly difficult for the new unit. As the same manager is also head of the infrastructure and light-rail operating unit, he is rather influential. On top of that, he gained plenty of expertise when he held the leading position in local public transportation. At the same time, he opposes the competition system and is therefore a natural counterpart to TraffiQ. However, the reported difficulties can be explained only from the point of psychology. Whereas TraffiQ seeks to establish itself in a competent and responsible position and therefore to brush up its achievements and market them accordingly, the manager of ICB and VFG needs to cope with a loss of responsibility and is fighting to show his own achievements of the past in a good light. This antagonism, plus a reversed command structure (previous subordinates are now making higher-level decisions), often leads to friction. TraffiQ's relation with other operators does not face similar problems. The difference is that TraffiQ became known to the public when VGF/ICB was excluded from one tender after having delivered the cheapest offer, resulting in a court case. In fact, one part of the city was pitted against another one, causing extra costs to the system that would have not emerged otherwise.

The contractual arrangements are very similar. In both cases, the duration has been extended over time to give more predictability to the operator. As a side result, search and transaction costs have been reduced. Also, in both cities, an option to extend the contracts has been established if both parties agree. This option can operate as an incentive for the operator to deliver good services and for the authorities to keep up a good relation with the provider. If used, the degree of competition is lowered.

Another issue regarding flexibility is that Helsinki did introduce a flexibility clause so that the amount of services in the contract can be changed to a certain extent even after the deal is closed. This clause helps the city to react to changes on demand, but on the other hand, it also reduces predictability for the operator and also threatens the profitability of the contract. In the end, it is a question of who takes the risk of uncertainty. Also, the nature of change seems to play a role, since adding a service is reportedly less of a problem than reducing services. On the other hand, Frankfurt relies on renegotiations for extra services. Usually, they offer compromises in quality for the extra service to avoid paying higher costs per vehicle kilometre. The Finnish model seems more favourable for the transportation authority and allows easier adjustments without negotiations, while the operators would clearly prefer the German model for its predictability.

Both authorities are very precise regarding specifications in the contracts, like the vehicles used, and are seen as partly inefficient by the operators. Authorities

apparently seek to exercise control over the various providers through detailed regulations. Decisions that were formerly made by the company managers—or even by people at lower levels—have now shifted towards the authority. One extreme example is the placement of the logo on a vehicle regulated by centimetres, which is an annoyance to some operators. There are also more strategic decisions to be made, like how important it is to have a third exit on every bus and what size the vehicles should be. The question to be asked is who is best to decide about the requirements: the supervising unit or the subordinate? The supervising unit supposedly represents the customers' and taxpayers' voice, but it can only make a general decision to be fair to all. The subordinate operator can optimize the individual turn but has a tendency to choose for his or her own profit rather than fulfil the demands of the users.

The authorities keep the routes and timetable planning in their own hands. Practical reasons are mostly coordination issues with other lines and modes of transport. Optimisation of one route may cause negative effects for the user, like long waiting times when changing a bus or irregular departure times. The planning unit is supposedly taking care of the sum of users' interests and balancing the effort versus the costs. From there, the authority decides on a policy like a 15-minute frequency. The question here is whether the operator would be in a better position to take care of this trade-off or the authority. Operators have an information advantage, while the interests between user and authorities are again more congruent. Assuming that demand-driven planning is the most efficient, the question then changes as follows: Is it easier to solve an information deficit or a potential conflict of interest in profit versus quality and quantity?

While the whole bonus system plays only a minor role in the volume, it is weighted heavier in Frankfurt at 5%; Helsinki is thinking of increasing it from 1%. All actors agree that small-sized incentives do not serve their purpose and need to be increased, such as when demands are unrealistically high for getting a bonus. For the service assessment, new technology helps to evaluate the delays and service failures, and both are part of the bonus system of incentives. Other criteria include cleanliness and friendliness. Frankfurt is seen here as overly strict, and Helsinki is not transparent.

As an example to illustrate the effect of specifications in both cities, bus quality is seemingly different. While it is not a problem in Frankfurt, where all criteria are met on a regular basis, the quality offered by the operators in Helsinki is sometimes dissatisfying, despite age specifications in the contracts. This problem occurs because harsh competition causes the operators to seek to compensate for the low income by poor vehicle maintenance, so even newer buses are in poor condition. On top of

that, the bonus system is not strong enough, and the quality problem does not influence the selection of future winners.

Network size plays a role as well. While Frankfurt decided to have just six network groups, Helsinki chose numerous small ones. The Helsinki solution helps to keep the market alive so that there is permanent competition and the chance to win new shares. It also gives small operators realistic chances to win a tender when big network pieces are beyond their reach. On the downside, reportedly big orders beat small ones in terms of economy of scale. The difference emerges when the operator is able to transfer vehicles and personnel from one line to another, thus reducing transfer times. Another advantage is a lower cost per unit when buying a larger number of vehicles. This observation has been confirmed in both cities and also means that large companies have the edge over small ones when operating in several cities. Finally, too-small tenders might be unattractive to bigger companies when these are too large to care. After all, economies of scale can help to explain why small companies survive in Helsinki but not in Frankfurt.

5.4 Institutional comparison of the three organisational regimes

In this chapter, this study compares the different modes of organising with each other, regardless of the case study location. The idea is to show how inefficiencies depend on the institutional framework. In order to systematically categorize the findings, it is useful to divide the potential problems into individual actor inefficiencies and those that are systemic (see Chapter 3). To understand the individual actor perspective, we choose the Bounded Rationality Theory, whereas the systemic perspective will be assessed using the Transaction Cost Theory.

From the perspective of bounded rationality affecting the behaviour of an actor group in a negative way, we focused on purchaser and provider, where the organisation form proved to be nearly consumer-neutral. We identified general information asymmetry in operations related to the contractual arrangements. General information asymmetries generally emerge when the actors are in separate bodies. The more distant the actors are from each other, the more different their interests are and the more likely information asymmetry will take effect.

Institutionalized exchange of information can help to reduce the problem. Another bounded rationality aspect is that of the struggle for survival (or more generally, the struggle for position), which leads to inefficient outcomes (see Chapter 2).

A particular value for the cities is that of a backup, so there will be a provider for sure in case of special events or a private failure. In both cases, this is an argument in favour of the public operators. On the other hand, both cities believe that competitive pressure by private operators lowers unit prices and pushes the productive efficiency of the city-owned operator.

Basically, it is believed that public operators have higher costs per unit and win competitions only with artificially low prices, which then "spoil" the market. However, the cities do accept deficits by their own operators because of the extra value they otherwise provide. The reasons are many, as follows. They provide higher reserves (Frankfurt), they have obligations from the city (all public operators), or they are accused of lower x-efficiency through attitude problems and a high sick-leave percentage (Tampere).

5.4.1 Bounded rationality of actors

General information asymmetry in operation

Ownership does play a role in the context of information asymmetry since the owner has a deeper and more-detailed insight into actual costs, demand, expected and provided service quality, and what happens during the operation of the business. For the public purchaser and organiser, it is easier to extract information from public operators in Wuppertal and Tampere. The balance is available in detail, and the true costs of providing services are known. For the same reason, keeping a public unit in Helsinki and Frankfurt is useful for the public authorities, despite being unnecessary. The authorities in Pforzheim and Jyväskylä are aware of the problem, and Pforzheim decided to keep ownership of the operator partly to ensure legally binding information flows from the operator, including the operator's balance sheet, detailed cost analysis, and service-quality level. However, information asymmetry remains an issue in Jyväskylä, where the city is unaware of the true cost level, money flow, and possible ways to reduce expenses. This fact was a major factor in the decision to introduce competition in 2014. Although the information flow, per se, is not

necessarily better, the potential of a private monopolist to exploit the situation is reduced. In the end, it is not the lack of information that is harmful but the danger of the other party taking advantage of it. The incumbent operator had a considerable information advantage in the tendering process but nevertheless lost the competition. The future will show if the newcomer underestimated the costs and overestimated the optimization potential.

Does ownership matter in a competitive tendering context? We have seen that ownership does have an effect on information asymmetry in a monopoly scenario, so the question is whether or not CT eradicates the differences. The second question is how competitive tendering affects the information-asymmetry problem in the cases. Since both Helsinki and Frankfurt decided to keep their public operator, we can compare the effects in each case. It turns out that the public operators provide valuable information for the city administration. Their experience is used for estimating costs in the future, as in Frankfurt where TraffiQ takes advantage of cost estimations in the planning phase and in predicting tendering results. In addition, the city receives real-cost updates. All these advantages are also available to the city of Helsinki and would be reduced in case the market were entirely private.

Another aspect of the bounded rationality category is the struggle for survival. The operators are willingly offering their services below their production costs in order to maintain their market position. All public operators in Wuppertal, Tampere, Helsinki, and Frankfurt are producing deficits, and they are kept alive with the help of subsidies. They fulfil tasks beyond the mere provision of transportation, especially in the competition scenario. They serve as a control organ as well as information provider and backup. Therefore, the city has a special interest to keep them in the market, despite their possibly producing at slightly higher costs (technically, they win the tenderings but display below-production costs). This trend shows that the city judges the added value of the public operator as being higher than the disruption in the market caused by the operator and the utilization of a real first-best-offer. From the operator's perspective, Helsinki has had cases of underpriced offers from competitors. The question of whether to categorize this as a bounded rationality problem or a struggle for survival is difficult, since the reason is unknown. An unexpected rise in costs or drop in revenues would indicate bounded rationality, whereas the fear of dropping out and losing the entire business would speak for a struggle for survival. The local informants' opinions suggest it was at least partly a struggle for survival. In contrast, Frankfurt operators do not show such behaviour. For Pforzheim, the monopoly has not been inherited but competed. Also, in this case, and similar to Helsinki, it is difficult to decide whether the reasons for

the deficit were based on a prediction failure or a struggle for survival. The local manager suggests it was rather a misjudgement of the economic potential and therefore a bounded rationality problem. In the counterpart Jyväskylä, the bus enterprise has been running profitably, so this category does not apply. Wuppertal and Tampere's public monopolists fought for survival in a different way. They managed to convince the decision-makers that reforms within the public organisation would be cheaper in the end than the alternatives. Thus, a window of opportunities was created in which reforms would take place, but the monopolistic character was left unchallenged. However, Tampere city authorities began to outsource about 50% of the traffic after the previous manager retired. Despite its possible coincidence, the timeframe and knowing about the influence of the previous manager suggests the significance of individuals in this context. One can argue that the fight for survival happens in the form of defending the monopoly through negotiation.

Pre-contract information asymmetry

One concept regarding information asymmetry of the purchaser is that of adverse selection. Since the administration does not know the capability of an organisation, it might choose an operator who is not capable of providing the service. However, in the investigated cases, all operators have been in the business for decades, either locally or on an international level, so this kind of difficulty did not occur. The literature suggests additional awarding criteria besides the price, in case of problems arising in this context (Laffont & Tirole, 1993; Laffont & Martimort, 2002; Janson & Pydokke, 2010). To avoid unwanted side effects for customers, planning authorities in the competition towns utilize detailed planning of lines and timetables, and authorities are able to set a frame for workers so that the operators are required to take over the personnel from the previous company. Furthermore, constraints regarding the vehicles' layout and age are being made, and these play a big role, especially in the competition scenarios. Both contracting-out case cities have a low influence in this context. For Pforzheim, it was a conscious decision to reduce the purchaser's influence in favour of emphasizing entrepreneurial freedom. The contract has only functional character, and the lines, as well as the timetable, are framed by guidelines only. Jyväskylä, on the other hand, has no power to influence the local operator's bus lines and schedules besides expressing wishes or fully paying

for it. The same observation is valid for the vehicle configuration. While all cities have age limitations for either the average fleet age or the maximum vehicle age, certain comfort and environmental requirements and a detailed layout for a bus are strictest in the competitive tendering cities. The reason for this is that the service should be standardized and loopholes should be closed.

For the operator, pre-contract information asymmetry compared to an incumbent is problematic when applying for the right to run bus transportation. Pre-contract information asymmetry can occur due to a lack of detailed knowledge about operating costs and expected revenue. As a result, the prices offered by newcomers may be unrealistic and lead either to the loss of the competition or to winning it on an unsustainable basis. In our case cities, we find unsustainable new entries by private operators in Pforzheim and Helsinki. The fact that operators in Helsinki have been producing deficits may be induced by several causes, of which a lack of knowledge about the real costs is one possibility. Pforzheim's operator is facing the same difficulties with an unprofitable business, causing tensions between the city and the operator and a premature end of the service contract as a consequence. Both cases, a contracting-out scenario and a competitive tendering, have little in common except for the change of the organisation system prior to the reported difficulties and the fact that both private operators are new to the city. In Pforzheim, the problem emerged despite a takeover of the personnel, including the management from the previous public operator, and the city co-owning the provider company. The decisive mistake in calculation caused by unrealistic expectations and faulty predictions was made beforehand in the application procedure when the offer was made. The operator overestimated the cost-reduction potential and revenues. Helsinki's near-bankrupt operator has been replaced by new operators. However, the recent bankruptcy of Westendin Linja Oy is less a matter of lacking previous knowledge and more of a general bounded-rationality problem or a struggle for survival problem, respectively (see below). Finally, in Frankfurt, information asymmetry may be one reason why few changes do happen in the market, as a lack of information leads to risk avoidance. Unrealistic estimations are already causing difficulties for operators in Pforzheim, Frankfurt, and Helsinki, and they have led to bankruptcies and severe economic problems among operators. Effects of this kind result in costs outside the usual calculation (externalities) and include transaction costs (see below).

Bounded rationality within the contract

This phenomenon is part of the more general bounded-rationality problem, which includes difficulties in predicting the future of both income and expenses. All actors are affected by bounded rationality, across all cases. This uncertainty also affects the arrangements between the purchaser and the provider, namely the contract, which includes definitions in regards to risk sharing. Therefore, it is interesting to see how the risks are defined in the different cases and who takes over the risk of varying demand, income, and expenses. On the other hand, there is also the question of how the rewarding process is regulated, who benefits from surplus, and who pays a potential deficit. For the contracting-in cities, the risk stays within the public sector: either the operator or the administrative body. Hence, a risk-sharing regime is of low significance. In both Wuppertal and Tampere, the city would have to pay for the operator's deficit and would profit from a surplus; therefore, the uncertainty aspect lies fully within the public realm. For changes in demand, the authorities either order more services or the operator negotiates more subsidies for providing additional services. In the contracting-out cities, Pforzheim's contract puts most of the risk on the operator with the duty to react to changing demand, resulting in a potentially lower income and general deficits for the bus company. However, possible income gains benefit the city. In Jyväskylä, the risk in the contract lies also with the operator for changes in demand and income as well as the profits and deficits. Both cities have arranged a rather fixed subsidy system, limiting the risk for the public authority. For the competitive-tendering scenario, contracts include a very detailed regulation of financial risk sharing where it becomes obvious that the arrangements are trying to cover most types of possible developments. Authorities insist that the number of services can be variable to some extent, but the price would not change. This information puts the risk of changing demands on the operators. On the other hand, subsidies involve dynamic adjustments to prices for fuel and salaries, which shifts the risk away from the operator towards the purchaser. The authorities keep any revenue, so the operators have no potential risk or gain from it (see also below).

Post-contract information asymmetry

Post-contract information asymmetry for the purchaser is generally relevant for avoiding loopholes that can be exploited by the operator, as well as for fulfilling the service-quality standards set up in the contract. Time accuracy, a typical problem in bus transportation, can be electronically surveyed via global positioning system (GPS). Theory suggests that information asymmetry is more prevalent in a public-private relationship than in a public-public one. Secondly, fairness and equality against all operators would seem to make surveillance more important in a competitive-tendering scenario, but the case investigations proved this thought wrong because the public monopoly in Tampere implemented electronic surveillance in the 1990s. These data can be further exploited for a customer information system, as was done in the same town. Generally, a GPS-based positioning system should be standard for bus networks as it can generally reduce any information problems in this sector. This fact suggests organisation neutrality of objective service data. While objective criteria can be retrieved by modern technology, perceived service quality issues, like cleanliness and friendliness, require inspection on a subjective basis. Tools for this investigation are user surveys and inspectors, and their use depends on the organising body. In the competition cases, the purchasers organise the implementation, while in public monopoly cases, including Pforzheim before the organisational change, the public operators executed quality surveillance just like the private monopolist in Jyväskylä. Data evaluated by the agents raise information asymmetry problems for the principal when access is limited. Finally, customers have the chance to complain about the service, and information access is regulated differently in the cases. While in the competitive-tendering cities, the organising body collects the written complaints; in some monopoly cities such as Jyväskylä, the operator is responsible for this task. In that case, there is a possibility that any complaints may be downplayed. All feedback that has been addressed to the driver directly is potentially prone to obscurity and might remain unknown to the purchaser in all cases. At the same time, a systematic difference, depending on the organisation scheme, is purely speculative.

Incentives

Within the incentive regime, we looked at how the operators are motivated to produce "efficient" services and if these motivational factors work. We have discussed in theory how the public operators have a different intrinsic motivation from private ones. Here we see how the organisational regime changes the default intrinsic motivation. As described in the theory section, incentives play a central role in this aspect and are institutionalized within the contract.

As we know, public operators are believed to have a flawed motivation to produce service efficiently. We find that in both cities, there are service contracts with an emphasis on effectiveness first through the definition of the amount of services to be provided. Efficiency is then sought by limiting the funds for producing those services. Thus, the regulation does not use incentives as a tool. In Wuppertal, this solution is not applicable because the financial corset would not allow expenses to exceed a defined minimum. The city administration believes institutionalised incentives would definitely help to improve efficiency in the system.

Tampere uses a non-institutionalised incentive system, and in the budget discussions for the following term, the operator can hope to get a bonus for good performance. However, the bonus depends on many factors that are beyond the control of the operator, mainly on the overall financial situation in the city. Over the years, the public operator's position has been stronger than intended by the city because the company outperformed the performance targets. In gratitude and fairness, the city administration first kept contracting out; later, competition was also driven away from the system.

Direct performance-based benefits are not utilized in both cases, even though evidence in the other regimes suggests that such incentives are welcome and useful. In Wuppertal, it would solely depend on the city budget; there have been no improvements in a period of years, so they would not expect any performance-based gratification. Instead, rather fulfilling cost-cuts plans are expected. The only incentive the cities give is guaranteed existence.

Private operators are self-motivated to produce efficiently because of the interest to optimize profit. The classic idea of market-based incentives is implemented in Jyväskylä, where additional ticket income benefits the operator. The city pays only a share of a fixed production volume but not a performance-based extra. There are, however, fines in case of poor service quality. On the other hand, Pforzheim decided

on a different regime. Any additional ticket income benefits the purchaser by 90%, leaving only minor monetary incentives for the operator, which are comparable to the competitive-tendering scenarios. In this context, incentives do not work for improving efficiency but are more for ensuring and improving service quality, and they indirectly influence the otherwise free-market mechanisms.

Both competitive-tendering cities utilize institutionalized incentives for their operators, which are fixed in the contract. The idea behind using the incentives is identical; the city believes the service providers need to be motivated to produce good-quality services, since the contractual arrangements would restrict the intrinsic motivation too much and lay ground for potentially poor service quality. As described in the case studies, the contracts are very strict in order to ensure quality services with negative incentives and to enforce the contractual standards. Positive incentives motivate for quality improvements. Operators regard these as important and promote a command of fairness that the incentives work the same way for everybody. Incentives are also used to set standards, which would apply to the benefit of the customer in the entire city, regardless of the operator.

Incentives are believed to be effective, so why is there a difference in applying them? Does it make a difference regarding ownership or market organisation if incentives are regarded as useful? We can see that in the competitive-tendering scenarios, the cities are using incentives, albeit with varying success. In the contracting-out cases, they are doing it in parts, while in the contracting-in cases, they are using them only indirectly. Incentives are supposedly improving the x-efficiency of an organisation—in this case, the operator. In cases where incentives are less frequently used, the city either does not understand the significance of them, is not allowed to implement them (bounded rationality) or assumes they are sufficiently functioning in the market system without interference from the city. In Frankfurt, the incentive regime is regarded as effective, while in Helsinki, the city administration understood the significance of it and the need to change the implementation for a satisfactory result. Incentives are very detailed and work in both ways: positive and negative. Also, fairness when making comparisons with the other operators does play a role, unlike in the monopoly cities. The contracting-out cities vary greatly, whereas Jyväskylä's operator keeps the ticket income and therefore has the most direct-market incentive, Pforzheim only pays out a small share of the ticket sale above a certain threshold. This action expresses the strong emphasis of traditional market mechanisms in the Finnish contracting-out scenario, while the German counterpart's solution is an outcome of the risk/benefit share that was

dictated by the city. However, when comparing quantity, the possible win for the operator in Pforzheim is about the same as the competitive-tendering cities.

Finally, we can see that the contracting-in cities do not offer direct monetary incentives but rather a less-fixed and more trust- and power-related scheme. If you manage to fulfil the demands, we promise you can keep your position and may profit in our future discussions. It becomes clear that the operator is more of a junior partner of inherited power relations in these contracting-in arrangements. Ownership does play a role in the incentive regime. The cities can decide whether to use monetary incentives (either positive or negative) but instead choose to use structural threats. On the other hand, the management of a public provider regards the guarantee of keeping the monopoly as a very valuable asset, which works well as an incentive.

5.4.2 Transaction costs of the system

While the approach towards individual actor groups has been based on bounded rationality, Transaction Cost Theory helps to investigate the potential systemic inefficiencies. These costs emerge as expenses in each system to keep it running and make changes to the system, and their character and causes vary, depending on the organisational regimes. In this part, the different forms of transaction costs are compared across the cases, depending on the context in which they emerge. Other than in the first comparison, the description needs to be systemic based on a phenomenon and cannot be oriented on a single actor. Therefore, the categorization varies from the above. Basically, this part is divided into transaction costs that emerge only once for making a change and those that are recurring.

One-time Transaction Costs

The change of organisations creates one-time transaction costs across all cases, wherever changes are made. The contracting in Wuppertal and Tampere experienced less change than Pforzheim and the competitive-tendering cities. In fact, avoiding transaction costs was a main argument to keep the public monopoly because structural change would be limited while enabling reforms deemed necessary by the management. Another way to minimize transaction costs has been through a long

transition time. In Wuppertal, the process is considered finished after almost 20 years, and Tampere is still restructuring (now towards tendering). As an example, the transaction costs served to physically relocate the planning unit in both cases, which remains within the public administration and is more closely connected to town planning and land use. The costs here are simply the expenses for relocation, rent, or the purchase of buildings and for finding a follow-up use for previously occupied assets. For the operator, becoming like a private company means downsizing manpower; employees had to be resettled in both cities. Costs emerge for the public to find new positions, for the transition time to learn the new profession, and for the potentially lower efficiency when people are working in a job that they have been forced into. Finally, they might take the job from an applicant who is potentially better qualified. Employees in one city have been re-trained, for example, as job advisors, with limited success.

For public monopoly cities, no changes in Jyväskylä indicate that there were no one-time transaction costs for this case. However, establishing the private monopoly in Pforzheim did include various transaction costs. Altogether, the city spent more than one million euros in consulting. The sale was very controversial, and a public vote was organised, which was also costly. When the joint venture was made, the players agreed to take over the existing employees, thus minimizing the operator's search costs for recruiting personnel and keeping expertise. However, the pressure to reduce costs had an impact on the employees. Losses in overall salary, reduced social benefits, more work, and stricter schedules led to strikes. Cutting benefits in existing contracts was legally impossible, and the city agreed to pay the retirement supplement in those cases—one typical arrangement and a factor for the city, which is easily overlooked when making a calculation. Unhappiness among the workers in Pforzheim also led to relocation to other occupations with the aforementioned consequences. In this city, one particular phenomenon observed recently over the discussion about costs resulted in the changes being revoked. The city and the private owner of its operator disagreed about the value of the company that the city plans to buy back, particularly regarding who would be taking over the debts. Even though there was a passage about this in the contract (see the bounded rationality part of the contract), the potential for large expenses that have been overseen when deciding upon the joint venture certainly exists. Now, a court case seems likely to close the deal.

Both competitive-tendering cities underwent a substantial structural change prior to the first competition, including creating new knowledge with their corresponding bodies in the administration and restructuring responsibilities within the public

organisations with the above-described transactions. For the public operators, a major restructuring took place. Prior to the competition, the public units were reformed and were managed to a large extent like private ones. Transaction costs emerge from creating cost reductions, such as a lower salary for the same workload at the expense of competitiveness. It is safe to say that without lowering the salary per produced unit, the public enterprises would not be able to survive in the competition. There are also transaction costs from the recurring strikes by workers who are unhappy with their conditions, and there are also search costs associated with recruiting new employees and then re-educating and relocating them.

Naturally, all three modes of organisation face one-time transaction costs whenever a change is implied. Changes involve both the actor and/or the institutions, and either is subject to transaction costs, which were also confirmed in the case studies. Transaction costs can be unpredictable, as in the Pforzheim case, and the fear of transaction costs keeps organisational structures in their present shape or helps to explain how the structural changes have been carried out. Most of all, a "smooth transition" is believed to minimize transaction costs, which explains why the actors look to avoid abrupt changes.

Recurring transaction costs

Systemic transaction costs include expenses that individual actors manage to externalize but need to consider when making a true calculation of the costs involved in making local bus transportation work. One example in this category is state aid, which either operators or future bus drivers are granted for educating new professionals, especially if these have been unemployed long-term and are part of a reintegration programme. This kind of aid is paid in all cities and plays a role in particular when the level of fluctuation among workers is high and the labour market is not able to cover the demand. By recruiting foreigners who previously had the same profession, the Helsinki solution keeps education costs lower. On the other hand, costs for language courses emerge. Recruitment campaigns in general cause expenses as well.

Transaction costs also help to explain why competition may not work well in markets. Managers and organisers in both Frankfurt and Helsinki report that it is difficult to find suitable depot space, especially for a larger number of vehicles, as in Frankfurt. This difficulty gives an advantage to the incumbents, as they already have

depots available. The cities have discussed the provision of that kind of infrastructure to help newcomers into the market, but so far the problem has been solved by sharing the facilities. Here it pays off to have a city-owned operator, as the administration can demand to rent out a depot in case the management is not willing.

There are a number of recurring transaction costs in the system that are needed to keep the organisation structure running. For all cities, this includes the negotiations for the contract, although in an in-house solution, they would be replaced by a budget discussion. Therefore, any kind of hands-on LPT system includes transaction costs. This arrangement is necessary because there are different actors in the setup: the principal and the agent. However, this part will show that the character of recurring transaction costs varies depending on the way the LPT is organised. Some of the transaction costs are compulsory, while others emerge depending on the particular circumstances, such as if something goes wrong.

For the public monopolies, as with Tampere and Wuppertal, the budget discussions turned into contracting discussions, the character of which is very similar to the previous arrangements. This change in institutions could not bring much change to the sense of incentives or motivation. The use of a contract does not enable a successful incentive scheme. It seems that as a constant factor, the public character counts more in the organisational setup than the purchaser provider spilt as a new factor. In the end, the city as an owner needs to cover operating deficits, no matter the causes. Incentives are about as useful as an integrated administration service. Applying pressure to increase efficiency is effective with or without the contract. It also seems that a threat to introduce competitive tendering is not necessary to trigger changes like in Tampere, but winning or changing the operator's management works as well, as in Wuppertal.

For the private monopoly cases, the contract is particularly important, and the discussions are said to require few resources. Regulations in the contract form the basis for subsidising private business; therefore, observation measures need to be taken. Incentives are used to steer the performance of the private operator and to fulfil certain service standards. Both cities use an incentive scheme based on the number of passengers attracted instead of performance-related incentives, which have a poor emphasis if they exist. Those incentives are rather small penalties if a standard is not kept. The contract could also be subject to legal dispute, which is highly unlikely in a public monopoly. However, it is seen between the public operator and the city in a competitive-tendering context. Furthermore, it is notable that the level of detail in the contract is much lower in a private monopoly situation than in a competitive situation. This distinction is related to the fact that the operator has

more responsibilities and the city has been reduced to buying services. Thus, coordination between the city and the operator is less vital.

In the competitive-tendering group, the amount of the transaction costs is likely to be the highest. Transaction costs on the operator side emerge for the tendering procedure, namely the application, which consists of a substantial amount of work according to the managers. Whereas the planning of work schedules and timetables needs to be done in any transportation-service regime, it generates extra costs for those operators that are not winning the competition, which is especially evident in Helsinki. For all potential operators, these expenses include application costs, such as planning for personnel and vehicles. According to the managers, it makes no difference how detailed the service description is since they need to make the calculation anyway for the personnel shifts and the vehicle turns. The difference in the contracting-in and contracting-out scenarios is that calculations of this type also need to be done by those operators that were not chosen; we find more recurring transaction costs where operators change after a competition. Buses are bought and sold, and infrastructure, like depots and repair facilities, must find new use. Finally, the workforce that has been employed at the previous operator must seek new jobs, and employees sometimes find it with the winner of the competition. The amount of the transaction costs here is also related to the duration of the contract. The number of operator changes increases with shorter agreements, as do transaction costs—an argument that applies as well for the organising part.

The actor group of the purchaser needs to organise the competition. They face pre-contract transaction costs, primarily the selection process of the bus operator. All costs related to organising the tendering do not exist in the monopolies, whereas tenderings take place at least once a year in Frankfurt and in the Helsinki region, de facto, several times a year. The transaction costs are high because the authorities are planning the whole network in detail, including the timetables and the lines. This is a task the authorities in the other regimes would not do.

Apart from certain expenses, we find potential transaction costs in the competitive-tendering scenarios, when the awarding process causes complications. One reason for both cities not to publish the results is the danger that they will be challenged by a losing entrant. However, a challenge leading to a court case occurred when Frankfurt decided to exclude an operator for formal reasons, who then decided to make a legal decision about it. Court cases for these particular reasons are unimaginable in the other cities.

The next group is transitional between the systemic and individual actor groups. It is systemic because the inefficiencies emerge outside the regular balance sheet of

the bus transportation. On the other hand, it affects one particular group: the bus drivers. Therefore, the question is, does bounded rationality or, rather, transaction cost theory explain what is happening here? Our interpretation points towards transaction cost theory because it emphasises the change of systems. In the next paragraph, we will explore the change of introducing quasi-market reforms, which caused pressure and led to the current problematic situation.

One visible effect of introducing the quasi-market to LPT is the fact that all cases, apart from Jyväskylä (which left its system unchanged), share the problem that worker satisfaction, especially among the bus drivers, has decreased. It made no difference what would be the target regime—a public or private monopoly or competitive tendering. Instead, four cities (Frankfurt, Wuppertal, Pforzheim, and Tampere) had the transportation integrated into the city administration, and the Helsinki region had a monopoly with multiple operators. The institutional change had a bad effect on stability, income, social benefits, fluctuation, identification, and atmosphere according to the drivers who had enough experience to compare. The reason for this effect lies with the pressure to improve performance in general. Since the labour costs make up approximately half of the overall costs to provide public bus transportation in a city, there is an emphasis on this part—a notion all managers agreed upon. As a result, typically above-standard extras are cut—if not immediately then progressively by slowly shifting salary systems—so that new employees are left worse off. An increase in working time per week and fewer holidays, a more dense shift plan, and unpaid breaks and transition times at the beginning and end of a work day are implemented when legally possible. The cases show, however, that this is a one-time phenomenon that reaches a limit once the reforms are finished and the new system is established.

All the quasi-market reforms are introduced in order to improve the cost efficiency of the operator. As more than 50% of the costs for LPT consist of personnel costs, operators will naturally try to include efficiency reforms for the workers. Unless new work methods can achieve better production from an individual without extra effort, this type of reform can either lead to more work altogether per individual or a lower salary. Throughout the cases, improved cost efficiency in a broad sense apparently includes the violation of Pareto optimality for one group. This would trigger resistance by the affected group, which was predominantly the workers in this study. As described in the cases, any kind of change to the system, independently from the organisation regime, has a negative effect on the workers. This relationship becomes especially obvious when the drivers go on strike because of the particular situation in their city. Of course, one needs to distinguish between

a Pareto-inefficient threat for worse working conditions and a struggle for improved conditions. Sometimes open strikes can be avoided by giving a new labour force different contracts than existing workers. The cases show workers' unhappiness with their situation is a major challenge to public transportation organisation. When looking into the details, one finds that Jyväskylä has been the only city where the operator has not decreased salaries or side benefits, redefined work time, or demanded more flexibility in the working contract. These changes coincide with structural reforms like making a public operator more independent (Wuppertal and Tampere) when preparing for competition (Frankfurt and Helsinki). In Pforzheim, the operator avoided major changes before selling its company, leaving the new owner with the problems. After the sale, the impact of the changes was immense for the workers, and clashes between them and their management have been permanent. Contrarily, as the only city that has avoided changes until now, Jyväskylä reports no cases of deteriorating contract arrangements. This observation leads to the conclusion that change as such has been bad for the workers, regardless of the nature of the change.

The attractiveness of joining a bus transportation operator is another indicator of the labour situation, as well as the average time spent in the company. While all companies report that workers tend to spend less time in the same organisation so that no connection to the organisation regime can be made, the attractiveness of a job does indicate its working conditions. According to the informants, the indicator is well influenced by other variables, such as job alternatives and the general economic situation. A closer look into the cases provides interesting results. Particular recruitment difficulties occurred more often in Helsinki than in Tampere where the demand could be satisfied with locals, and the situation in Jyväskylä has never been problematic. This finding can mean two things. It is either a particular arrangement where competitive tendering is particularly bad for workers, followed by contracting-in with contracting-out being the best, or general reform pressure on the operator is passed onto the workers, since Helsinki has been the city with the strongest structural change, followed by Tampere and an unchanged Jyväskylä. Upon review of the German cases in order to test this assumption, all cities have utilized recruitment programmes to find drivers. It is difficult to rank the cities based on the level of dissatisfaction. Instead, worker resistance is always provoked either by intended or actual changes in each city, an observation that confirms the findings from the Finnish cities: Organisational pressure has negative effects on working conditions and work satisfaction.

Potential threats to a functioning system: Collusion

Collusion is regarded as a central threat to efficient markets, and it is as much of a threat to quasi-markets as LPT. Collusion emerges when at least two actors come to an agreement at the expense of a third party. Such agreements can be between operators or between the purchaser and the provider. Often, it is difficult to draw a line between cooperation, collaboration, and collusion. Possible criteria would be secrecy of an agreement, the aspect of legality, or a third party having a disadvantage. While secret agreements are hard to detect by nature, and no illegal practice has been observed in any case, the analysis concentrates on the question of whether arrangements have negative effects on third parties.

Coming from the integrated service regime, one could argue that in pre-contract times, the unclear money flow between the purchaser and operator points to collusion. Despite being a widespread practice, it has been made illegal by the EU (see Chapter 4). Private operators argued that secret subsidies would prevent a competition, keeping them out of the market. Thus, they regarded it as their natural right to compete for services. (However, this kind of natural right cannot be supported from an efficiency point of view. Efficient practices for the purchaser, customer, and the entire system have a priority). They would claim that the same argument would benefit the customers and even the purchasers by saving them money through competition. The secrecy aspect of the agreements has been eradicated, since all subsidies are public now. Those arrangements have been changed in time, sometimes with the help of grace periods but always within the legal boundaries. The question remains as to whether someone has been disadvantaged from this collusion.

More agreements that are accused of being collusion in the existing quasi-market can be found today. In the public monopoly scenario, we find that in Wuppertal and Tampere, there have been arrangements where the city promised to protect the operator from competition if he would fulfil certain "efficiency" goals. Both operators were successful in meeting the goals and enjoyed a protected environment (in Wuppertal, fully; in Tampere, partly). Thus, is this kind of agreement at anyone's expense? For the customer, competitive tendering does not mean improved service quality or lower prices. However, the lower unit costs for the city have been reinvested in the network and, therefore, the customers have gained. Yet this argument can be countered by referring to the cuts that the public operator has already endured, and any further gain is likely to be marginal. Therefore, the taxpayer

(city) and the customer would have marginal gains at best, which leaves the other potential operators (see above; the same argument about "natural rights" applies).

The contracting-out city Pforzheim cannot be accused of collusion within the system, as the contract has been established through competition. On the other hand, before putting its network into competition recently, Jyväskylä and its private operator could have been subject to collusion. There has been an awareness of relatively high subsidies, but yet there was no political will to take action for changing the mode of organisation. The fear of high transaction costs was mentioned, and everything else is speculative. The speculation would be that individual interests are not coherent with the interest of the city actor group, so that political and administrative individuals would make decisions that were not in the best interest of the city. However, there is no hard evidence for this speculation.

In the competitive tendering cases, we need to check for collusion between the operators, which could lead to a quasi-market failure. We have seen active collaboration between the providers in both cities, which is believed to improve the efficiency of both actors in a win-win situation. Infrastructure is shared, and there are agreements for taking over personnel, vehicles, and subcontracting lines and ensuring smooth transitions after a change in operations. None of these arrangements are illegal or secretive, but is anyone affected in a negative way by this collaboration? Such a violation of market efficiency could happen when operators damage the competitive component of competitive tendering by manipulating the tendering outcome (as seen in the energy market sector in Germany). In Helsinki, deals where competitors agree beforehand on the market share seem impossible because of the number of competitors, and the evidence of frequent changes in who is winning indicates a fair competition. As described in Chapter 5.3 (case study comparison CT), Frankfurt is more prone to such collusion; however, at this point, there is no evidence for it. The city's active stance in promoting competition also works prophylactically against such a fear as a side effect.

Finally, there is a question about possible collusion between the purchaser and the provider in the competitive-tendering scenario. While the organisational approach of tendering makes the basic bilateral arrangement non-secretive per se, there is an inherent accusation in both cities of a particular treatment by the city towards its own operator at the expense of the private operators. Namely, there are some extra subsidies that only public operators enjoy, and public knowledge of this information would cause disruptions in the market. These disruptions would leave the city (taxpayers) worse off and deprive private operators from well-deserved market shares. The private operators are also undoubtedly affected in a negative way.

In the end, the discussion comes down to the bounded rationality aspect of a city that has to make a decision between the positive side effects of owning an operator and the price it will pay for it.

Another form of collusion is discussed in the concluding Chapter 6: Are the actors of purchaser and provider colluding on the expense of the personnel?

5.4.3 Summary: Main aspects of the case study comparison (Fig.11)

Efficiency aspect	Public monopoly	Private monopoly	Competitive tendering
Information asymmetry in operation	Same owner in purchaser and provider Good data accessibility	Different owner, poor data accessibility	Various owners Accessibility depending on the owner
Struggle for survival	Agreeing on reforms in order to keep monopoly	Only if obtained by the competition	Losses from excessive competition
Pre-contract information asymmetry		City: unknown real costs	Op: prediction of costs and demands in tendering—advantage for incumbent City: Detailed preplanning
Bounded Rationality within the contract	naturally very high flexibility, risk plays no role, service contracts	City: Principal-agent problem. Risk allocation more on operator, low flexibility Functional contracts	Risk allocation more for the city, private operators, high flexibility Detailed contracts
Post contract information asymmetry		Loopholes, arguments	Surveillance more important, loopholes, arguments
Incentives (lack of)	Lack of motivation, structural threat – survival as incentive	Profit-driven, ticket income (JYV), and small incentives for cost reductions (PFO). Fines for poor quality	Profit driven, struggle for survival, small incentives, also quality fines. Varying success
One time TAC	Relatively few changes	No TAC in JYV, big changes in PFO	Big changes for organisers and operators, expertise
Recurring TAC	Budget negotiations	Contract negotiations	Tendering, change in ops, search costs, multiple

			planning
Collusion potential	City-operator on expense of the city (taxpayer)	City-operator on expense of the city (taxpayer)	Operator-operator on the expense of the city City-public operator on the expense of the competitor
Trajectory actor problems	Employees	Employees in Pfo, not in Jyv	Employees

6: Conclusion: Discussion and outlook

Using New Institutional Economics, this study has shown how quasi-market solutions cause new inefficiencies in six cases of LPT in Germany and Finland. It starts with an assessment of potential theoretical inefficiencies that could occur when applying the institutional setting called the quasi-market. These inefficiencies exist when changing a system as well as maintaining it. For that reason, the theory also suggests that the nature of the inefficiency depends on the exact institutional setup. Results from the case studies then prove the relevance of institutions. Furthermore, they show that there is a large array of inefficiencies that need to be considered if one wants to reflect reality. One characteristic of this study is that it does not make unrealistic assumptions and is not trapped in tight constraints.

The study has taken a step towards bridging the gap between administrative sciences, which have a hazy efficiency concept unless they use a plain production efficiency concept (cf. Almqvist, 2001) with economics through a sector approach for illustration sake. For this task, New Institutional Economics with a qualitative approach seemed to be the right choice. It became clear how certain decisions by the administration in the quasi-market context cause efficiency problems.

Of course, this study operates in limited areas, using only one particular sector of public service and European cases with an EU background. Expansion of the scope of this study can be done either geographically or by taking other sectors of public services. Investigating, for example, health care or education would show to what extent the results found here are specific to LPT. As mentioned in the beginning, LPT is supposedly a rather easy sector for the quasi-market organisation scheme, indicating that other sectors might be facing even more problems. Regarding the choice of location for the cases, actors are culture bound, so their behaviour might vary in a different cultural setting. Hence, a similar study in southern regions of Europe might produce other results to some extent. For cultural aspects, values, traditions, and rules, such power, distance, or the common willingness to comply with laws does affect the application of institutions and the interaction between individuals. Therefore, it is relevant to institutional economics.

The focus of mainstream research on cost efficiency from the public viewpoint leads to an optimisation paradigm that is centred on the use of resources. This

concentration causes a neglect of other factors outside its boundaries. Motivational aspects are only relevant when they endanger work results, ignore the social component of having a secure workplace, abandon collective team spirit, etc. Seeing the employee exclusively as an economic asset is dangerous to society. Flexibility in work shifts, holiday planning, and moving to get a job jeopardizes family life. Neglecting implications of this problem leads to one-dimensional results, optimising one factor by exploiting other, non-measurable factors.

Following this argumentation, it is fair to ask how much economics should be consulted at all to solve difficulties in society. While mainstream economics does heavily suffer from these challenges, institutional economics have come a long way to reflect reality by its holistic approach. It can help detecting causes and consequences and look outside the box of numericals but embraces the complexity of a society. With that being said, new institutional economics is a strong analytical tool; however it is difficult to derive normative recommendations from it apart from merely pinpointing at problems.

This study discussed the quasi-market reforms in local public transportation and the premise to improve the efficiency in this sector of public services. We have seen that unsurprisingly, each of the organisational modes has its own inefficiencies, despite the generally acclaimed gain in productive efficiency from quasi-market reforms. Regarding the actor groups, we find that there are clear winners and losers in the reform. Primarily, private operators are winning because of a new opportunity to run services and an increase in the overall market. The taxpayer is winning because the unit costs have decreased, and the user is winning because of an increased service spirit in the public transportation sector in general. On the other hand, they are all affected in a negative way by the increased monetisation of the use of public services. The city benefits from reduced subsidies per unit, but overall gains in the larger context remain doubtful. Finally, for the employees, the reforms mean more work for less money and other various hardships.

The management of each public operator (current and previous) expressed its gratitude to the quasi-market idea so that they would be enabled to introduce administrative reforms within the public service unit that they deemed necessary. The resistance of the employees could be lowered with the reforms, and the unit could be changed so the processes would follow the efficiency criteria. The introduction of a quasi-market therefore presented a "window of opportunities" for the management. Less bureaucracy and more managerial freedom is another gain welcomed by the managers.

In regards to the logic of the efficiency gains, the purchaser reduces subsidies either through direct negotiations or as an effect of competition. Consequently, this puts pressure on the operator's management to reduce the production costs. This action leads to several effects as follows: structural reforms in the form of process optimisation and efficiency orientation, the reduction of reserves/slack in personnel and material, and the pressuring of workers by increasing the output per worker while reducing input. The last point is accomplished in several ways. The same work is done by fewer employees (including the management), and salary extras are cut where it is legal. The potential work base is increased by recruiting employees from outside the city or country or re-educating workers from different sectors with monetary aid outside one's own budget. Thus, one can see how the pressure to reduce costs is passed through the different actors and falls on the "lowest" group.

The quasi-market also has a socio-economic impact. One key outcome of the quasi-market reforms in the local public transportation sector is generally speaking the violation of Pareto efficiency for the people working in service production. Thus, the tool of QM reforms turns out to be a way to discipline the labour force. The danger of losing a job and a regular income raises the willingness of workers to accept worse conditions, just as an increased competition among the workforce does. The threat to sell or lose a competition also places strong pressure on one to accept whatever is offered. Legal minimum salaries and defined conditions set a framework for the working environment, but extreme economic conditions make the labour representatives willing to accept below-par deals. The cities show creative attempts to work around those regulations (Wuppertal, Pforzheim). Interestingly, Swarts and Warner (2014) found that reducing labour costs is the central target of the reform in Berlin instead of harnessing the benefits of private sector management.

Is the efficiency shift in the quasi-market a blessing or a curse? As discussed above, the reforms impacted the actors in different ways, and it is safe to say a large part of the increase in efficiency has been gained by making the workers worse off. When discussing this factor, all the other actors apart from the workers seem to have no regrets surrounding this development and regard it as a natural phenomenon of our times. However, we find it interesting to investigate the mechanisms, causes, and consequences of what is happening. We find that EU legislation is enforcing a quasi-market, taking away the decision from the municipalities that are the biggest producers of LPT. The management will try to save their position when possible but is willing to sacrifice the workers' privileges for the position. When making an overall evaluation, one should ask how fair it is when higher administration (EU) dictates with apparently the moral support of all other levels and reduces the wellbeing of

one group of people – the one that does not have a lobby in the EU. The workers are employed by the cities, and the city is stripped of its possibility to grant extras to the people who work for them and is put into a corset of regulations instead. On a moral level, there is a question of how much everyone needs to tighten his or her belt. Is the weakest link or the one with the least influence really the one who has to wear the smallest size? Public employees do work for the public, but does the public know how to treat their workers as well? Taxpayers are known to have a "not in my backyard" attitude and want the taxes for their own group reduced and desire strong public services that they need themselves but neglect those of others. Luckily, the awareness of a general need to have strong public transportation is sufficiently widespread, but the willingness to fund it has decreased. The group that suffers the most is the workers (and the users who buy higher ticket prices).

While the overall efficiency question cannot be resolved, there is no doubt that individual productive efficiency on the worker level has been measurably increased. However, this increase comes with side effects that are difficult to quantify. By strictly examining the monetary aspect, it is evident that public transportation is being produced more cheaply than it used to be according to many studies. Our case studies revealed how these gains are directly connected with a loss of partly immeasurable qualities. While a loss in retirement premiums or other benefits may be possible to quantify, it is impossible to value the urge to go to work despite being ill, the insecurity of potentially losing the job, the flexibility clause that makes it impossible to make long-term holiday plans, a higher stress level which may or may not harm health, and the loss of a community. How about the change of living place or the loss of friends, family and social network when migrating to get a job? It is dangerous to neglect all these side effects when evaluating the impact of quasi-market reforms. The workers have been outspoken about those concerns in the case studies. According to the representatives in all cities that have experienced reforms (other than Jyväskylä), we must question how dedicated a worker is supposed to be and what is fair compensation for their work.

It is important to note that this study focused on inefficiency (i.e., negative outcomes of the quasi-market reforms) and did not judge or disqualify this mode of providing public services in general. The extent to which previous inefficiencies were coped with has not been part of the research. However, if one wants to judge the value of the quasi-market to improve efficiency, this positive side needs to be included as well.

As a conclusive remark regarding efficiency, given the problems that are shown, this study sides with the notion that the quasi-market cannot be regarded as the

ultima ratio to be preferred over alternatives because of superior efficiency traits. Also, this study does not suggest that any of the three investigated organisational modes is superior to another. However, it does offer the service purchaser a perspective of what to expect when considering one organisational model. It thus helps the city administration to make a better-informed decision and to know what to expect from a possible change.

What is the feedback line towards theory? This study used theory to observe and analyse cases. Is there something to be learned from the cases to amend the theory that is in use? One thing to be learned from this study is that inefficiencies are very contextual and depend on many factors. What works in one case might not work in another despite seemingly little difference in the organisational framework. In addition, the research brings validation and transparency to the theory by including facts from real life. The institutional environment is changing constantly, so there is a permanent need to include these realities into the theory. Finally, it becomes obvious how much efficiency depends on the perspective of the actor.

Suggestion for further research

One useful extension to this work may be a comparison across various sectors. Similar modes of organising exist in many different sectors with public services, like social and health care, education or services with public interest, such as energy and water facilities. In order to determine to what extent the results reported here are sector-specific and which are general, a comparative research study would be helpful. The findings regarding information asymmetry in particular depend on the character of services and are known to be rather simple in the context of LPT. From this, an extension to the quasi-market theory would hopefully emerge about the general strength and weaknesses of this approach.

Another possible extension is the inclusion of unregulated markets, so as to compare the quasi-markets with the free-market approach. This comparison would have the challenge of different institutions and actors, so there is not necessarily a purchaser and no contract. Thus, this study will be somewhat asymmetrical. A network coordination problem also will arise. In the competition version of the quasi-market, the public authority takes responsibility for planning the network and coordinating it; free competition naturally leads to coordination issues with negative

consequences for the customer. The companies will pursue the optimisation of their own productivity at the expense of the greater good.[37]

This study used Finland and Germany as case countries and is therefore within the regulatory framework of the EU. A comparison with cities in other countries outside the EU, such as Australia, could be very interesting as well. The EU especially regulates the payment of subsidies and restricts the free choice of municipalities regarding their preferred way to organise LPT, so it would be noteworthy to have a country where the cities are free to choose the mode from a variety of approaches. In this study, that choice was restricted. Under the subsidiary premise that a city knows best what is in its own interest, the EU regulation causes extra inefficiencies or at least challenges.

As mentioned, the concept of hybrid firms provides a challenge to the study. Further research in this direction may help "fine tune" the ownership aspect into smaller components and help understand the significance of individual arrangements for the whole organisational system and is therefore encouraged. As the quasi-market is causing new and different inefficiencies than the free market and the in-house regime, a hybrid firm may suffer from new problems as well. However, due to the variety of hybrid forms, a slightly different approach than used here needs to be taken in order to keep the amount of data within reasonable boundaries.

Based upon the theoretical approach used in this study, it needs to be noted that despite the broad approach of New Institutional Economics, not all aspects of efficiency were covered. One example of an overlooked aspect is the question of steering efficiency and exercising influence. Questions related to this topic emerge repeatedly in the case studies; however, they were left out of deeper analysis since the focus was on economic aspects and the political viewpoint put to the periphery. A study with a focus on policy effectiveness will help to gain understanding of this point.

Finally, I have argued against the usefulness of quantifications in this study. People with a particular interest in the quantification of efficiency find in this study a guidebook as to which types of data are important to look at. It illustrates the kinds of changes that have taken place and therefore provide a tool as to which numbers should be taken into consideration in order to have a holistic picture and connect sheer numbers with causalities. However, it will be difficult to access this data from the outside, as it is often considered sensitive or unavailable. Still, some data can only be estimated.

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[37] For a theoretical take on this, see Weiss (1999) and (2006)

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Appendix B: List of Abbreviations

QM: Quasi-market

LPT: Local Public Transportation
NIE: New Institutional Economics

RWE: Rheinisch-Westfälisches Elektrizitätswerk AG, Private Energy Company
WSW: Wuppertaler Stadtwerke, Utility Works of Wuppertal
WSW: Mobil: Public operator in Wuppertal
TKL: Tampere Kaupungin Liikennelaitos: Public operator in Tampere
VGF: Verkehrsgesellschaft Frankfurt, previously integrated planning and operating unit, current holder of infrastructure and owner of public operator ICB
ICB: In der City Bus, public operator in Frankfurt
HRT: Helsinki Regional Transport, purchaser and planning unit in Helsinki
HELB: Helsingin Bussiliikkenne, public operator in Helsinki
YTV: Public planning and purchaser unit for Regional Traffic in Helsinki
HSL: Helsingin Seutuliikenne: Public planning and purchaser unit Helsinki + Region
EVP: Eigenbetrieb Verkehrsbetriebe Pforzheim: Public purchaser unit Pforzheim
SVP: Stadtvekher Pforzheim: Public (Hybrid) Operator Pforzheim

Appendix C: List of Figures

Appendix D: Interviews

Name	Position	Code	Interview Date
Lahdenranta, M.	Former manager of operators Vantaa Liikkenne and Veolia	HEL1	Jun 2011
Sinisalo, K.	Manager purchaser HRT	HEL2	Jun 2011
Hakavuori, J.	Manager operator HELB	HEL3	Jun 2011
Vihavainen, J.	Manager operator Veolia	HEL4	Jul 2011
Virala, M.	Bus driver representative	HEL5	Jul 2011
Anlauf, K.	Manager TraffiQ purchaser	FRA1	Jul 2011
Rautschka, A. and Schäfer, C.	Manager Operator VGF/ICB	FRA2	Jul 2011
Englisch, B.	Manager Operator Arriva	FRA3	May 2011
Proske, B.	Manager Operator Veolia	FRA4	Jul 2011
Eisenreich & Senf	Bus driver representative	FRA5	Jul 2011
Schmidt, R.	Planning TraffiQ Purchaser	FRA6	Jul 2011
Etges, T.	Manager TraffiQ Purchaser	FRA7	Feb 2012
Schwarzer, J.	Manager Operator SVP	PFO1	Feb 2011

Mellenthin, B. and Rompca, J.	Manager Purchaser EVP	PFO2	Feb 2011
Benda, I.	Users group Fahrgastbeirat	PFO3	Feb 2011
Kratzer, R.	Bus driver representative	PFO4	Feb 2011
Leinonkoski, H., Lipponen, J, and Tuominen, H.	Financial City Manager, Manager Purchaser	JYV1	May 2011
Raunio, J.	Manager Operator JYL	JYV2	May 2011
Hämäläinen, J.	Bus driver representative	JYV3	May 2011
Rainio, M.	Manager Operator TKL	TMP0 (pilot)	Feb 2007
Rainio, M.	Manager Operator TKL	TMP1	Mar 2010
Periviita, M.	Manager Purchaser	TMP2	May 2009
Nyblom, K.	Bus driver representative	TMP3	Jan 2013
Hoffman, P.	Manager Operator WSW	WUP1	Jan 2011
Klöpper, V.	Manager Purchaser	WUP2	Feb 2011
Jäger, U.	Driver, group leader	WUP3	Feb 2011
Schmitz, F.	User	WUP4	Feb 2011