Performance effects of privatisation: an empirical analysis of telecommunication companies in Germany and Romania

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Abstract

The privatisation of state-owned companies is still on the agenda of many governments worldwide. One often stated goal in the privatisation process is the increase of efficiency of the company. The question is which factors do lead to an increase in efficiency and performance of a privatised company. Where are the fundamental differences between public and private companies in this respect? One goal of this paper is also to determine if other or additional variables influence the efficiency of privatised companies in transitional countries - in contrast to developed economies. Based on the research literature, a model was developed that displays all major forces and effects in the privatisation process. Two case studies of telecommunications companies in Germany and Romania are utilised to verify the model. It is expected that privatisation will lead to an increase of efficiency, but that the main thrust derives from competition. Regulation and organisational change will typically also increase the efficiency of the company. The variables “laws and policies” and “economic condition” are of special importance for privatisations in transition economies.

Keywords: Privatisation; competition; regulation; organisational change; efficiency

JEL Classification: L33, M10

1. Introduction

The privatisation of state-owned companies has been a worldwide phenomenon. Internationally, it is still a current topic. In 2015, governments generated a record of EUR 289.5 billion in privatisation revenues worldwide and in 2016 they raised EUR 241.4 billion (Privatisation Barometer, 2017). In Europe, privatisation is still on the agenda of many European governments and has
generated significant revenues also in the last few years – especially in the years 2013-2015 (Privatization Barometer, 2017).

What has led to the appeal of private ownership for governments worldwide? One explanation is that the intellectual views about the relative roles of the market and of the public sector changed in the 1970s. The notions of market failure that had delivered a reason for government intervention were challenged by ideas of government failure (Jackson & Price, 1994). Neo-liberal programmes that pressed for the privatisation of state assets, a decrease of state involvement in the economy, lower direct taxation, unrestricted financial and trade movements and a decrease in the state’s social welfare function came to the fore especially in the USA and the UK (Dicken, 2011) in the 1980s.

One major criticism about public enterprises has been that they are inefficient (Clifton, Comín, & Díaz Fuentes, 2003). State-ownership was considered to be one of the reasons for the inefficiencies of public companies. The goal of privatisation was thus inter alia to improve the economic performance of the respective companies (Nestor, 2005).

The focus of this article is thus on the privatisation of state-owned companies and the effects of it on the efficiency and performance of companies. The challenge is to determine which forces and effects - besides the change of ownership - have exerted a significant influence on the efficiency of the company and to which extent. It is assumed that competition will exert a stronger influence on the efficiency of the company than privatisation itself. Based on the theoretical literature, a model was developed that will display all major forces and effects in the privatisation process.

Two case studies will be used to verify this model. The German company Deutsche Telekom and Telekom Romania were chosen for the case studies. Romania was still in a transition period at the time of the privatisation of Telekom Romania and has thus offered a possibility to compare the differences between privatisations in transitional and developed economies.

The telecommunications industry is an appealing sector for this research. The privatisation of many telecommunication companies coincided with an immense technological revolution that transformed a previously natural monopoly into an intensely competitive industry - this has made a quick transformation at the company level more urgent (Nestor, 2005).
2. Theoretical aspects concerning the forces and effects in the privatisation process and their influence on efficiency

According to economic theory, two broad forces exist that lead to high internal and allocative efficiency – the product market and the capital market (Parker, 1994). The implications of ownership, competition, regulation and organisational change on internal, allocative as well as on dynamic efficiency will be discussed below.

2.1. The implications of the change in ownership

The key intellectual force for privatisation derives from a deductive or a priori reasoning based on public choice and property rights theories (Parker, 1994). It is assumed that private ownership involves larger incentives for the pursuit of economic efficiency than public ownership. Empirical evidence of these theories is however weak. These theories were communicated in publications of free market pressure groups – e.g. by the Adam Smith Institute and the Institute of Economic Affairs (Parker, 1994).

However, this does not imply that privatisation cannot have a positive impact on the performance of companies. According to the research literature, the ownership rights are of importance as they determine the objectives of the owners of the company and the methods of monitoring the performance of the management. Alterations in the property rights will inter alia considerably influence the incentives and consequently the behaviour of the management (Vickers & Yarrow, 1988).

Private companies are compelled to pursue the goal of internal efficiency as to generate profits. Otherwise, they risk a take-over or bankruptcy. On the other hand, state-owned companies do not face the threat of bankruptcy and take-over in general. This might distort the incentive for efficiency. However, in any discussion about ownership and efficiency it must be taken into account that concerning state-owned enterprises governments have traditionally pursued other objectives than shareholder wealth and profit maximisation (Megginson & Netter, 2001). Public companies have typically displayed a political and social agenda as well and have pursued inter alia goals like a redistribution of wealth, public health (e.g. as in water distribution) and social justice.
A simple distinction between “public” and “private” companies is too unspecific in relation to its effects on the performance of the company. The respective degrees of ownership should be considered. In emerging economies, additional ownership factors influence the efficiency of the company according to the research literature: 1) foreign or domestic ownership, 2) outsider or insider (management and employee) ownership, 3) concentrated or dispersed ownership.

In emerging economies, a dominant foreign ownership seems to lead to a better performance of the company than a dominant local ownership (Dharwadkar, George, & Brandes, 2000; Brown, Earle, & Telegdy, 2010). In these countries, an insider ownership is often linked with a lack of management skills. Also, the knowledge of free market approaches and processes is often missing. Insider ownership may inter alia lead to a reduced risk taking and the avoidance of restructuring measures that could involve redundancies. In this context, a privatised company with an outsider ownership is expected to display a better performance than a company with an insider ownership (Dharwadkar et al., 2000).

A concentrated shareholding involves higher stakes and lower coordination costs due to the smaller number of shareholders – the benefits of disciplining and monitoring the management outweigh the costs of it (Dharwadkar et al., 2000). In emerging economies, a limited protection of minority shareholders and a weak governance can exert negative effects on the company.

In developed economies, a low level of ownership concentration can be effective based on the legal protection of minority shareholders and on a strong corporate governance structure (Dharwadkar et al., 2000). Dharwadkar et al. (2000) mention that in emerging economies a dominant ownership larger than fifty per cent together with a working voting mechanism are needed in order to generate an effective ownership concentration in the context of strong governance (in developed economies research indicates that five per cent is sufficient).

2.2. The effects of competition and regulation on the performance of the company

It is assumed that privatisation will lead to an increase in efficiency, but that the main thrust for static and dynamic efficiency is derived from competition. According to Vickers and Yarrow (1988), an effective competition and a good regulatory policy typically have larger positive effects on the performance of the company than the ownership per se.
According to public choice and property rights theories, a privatised monopoly will lead to some efficiency improvements (which might suggest higher profits instead of reduced prices), but the largest gains in efficiency will be achieved where privatisation is linked to an increase in competition (Parker, 1994). If competition is missing, the privatisation of an unregulated company is likely to lead to higher prices (Clifton et al., 2003) and thus exerts a negative influence on allocative efficiency.

If effective competition does not exist – e.g. immediately after the liberalisation of the market – a regulatory constraint is indispensable as to bridle the market power of the incumbent company. Competition policy alone will not be sufficient in this case. Regulation needs to simulate the competitive constraint.

The task and the challenge of the regulatory authority is to design incentives as to achieve static and dynamic efficiency. The regulation of prices and of access to the network elements of the incumbent are central in regulatory policies for network industries. The regulated company typically holds more information about the cost and demand situation than the regulatory authority.

This information asymmetry between the company and the regulatory authority is at the heart of the economics of regulation (Vickers & Yarrow, 1988). However, also the investment behaviour – especially of the incumbent company – is of utmost importance as it determines social welfare. Investments might be hindered by the fear of an unfair future regulation (Vickers & Yarrow, 1988).

Investments and new product and service innovations by competitors influence the dynamic efficiency of the competitors and the incumbent. Competitors might introduce new products or processes that the incumbent company did not think of or had little incentive to introduce (Vickers & Yarrow, 1988).

On the other hand, competition and regulation may decrease the incentive for investments and innovations if the company is not able to recover the costs of its investments. Low access prices to the network of an incumbent may for example lead to allocative and internal efficiency but can also negatively influence the incentives for investments into this network (van Dijk & Mulder, 2005; Distaso, Lupi, & Manenti, 2010).
2.3. Organisational changes in the context of privatisation and liberalisation of the market

Alterations such as the privatisation of a company or the introduction of competition and regulation typically lead to organisational adaptations within the company. According to strategic management, a strategic fit between the company and its business environment needs to exist (Johnson, Scholes, & Whittington, 2008). Otherwise, the company will not be able to perform at its best.

In order to achieve this fit, changes in the organisational and operational structures, in the strategy, in objectives and the corporate culture as well as in labour relations are important.

The organisational structure in the privatised company is likely to be more decentralised as private ownership and incentives replace the direct supervision from headquarters (Cuervo & Villalonga, 2000). It can also be expected that a privatised company displays a flatter organisational structure – thus facilitating the communication between the management and the employees (Zahra, Ireland, Gutierrez, & Hitt, 2000). The changes in the company’s environment will typically also lead to a change in the corporate culture. The latter is likely to display more market- and output-based incentives, to perform a shift from political to financial goals as well as to proceed from a production-focused organisation to one of customer orientation (Cuervo & Villalonga, 2000).

One source of efficiency is frequently the factor labour in privatised companies. Privatised firms regularly reduce the number of employees. Salaries and benefits are frequently revised to mirror labour market conditions; incentive systems and other approaches are utilised to motivate the employees and increase their performance (Zahra et al., 2000). Investments related to technologies, product(ion) and process innovations offer the opportunity to reduce labour costs. As Florio (2003) for example has shown in his analysis of British Telecom’s privatisation, investments especially in transmission equipment and networks substituted labour to a large extent. The privatisation of a company typically also leads to changes on the management level. While it has not been uncommon to exchange the top management of privatised companies, the senior and middle management have often been able to keep their positions after privatisation (Nestor, 2005).
In transition economies, the organisational transformation is more challenging as in developed countries as intense social, political and economic adjustments occur. An institutional upheaval can cause conditions that inhibit an adaptive organisational alteration of the company by hindering organisational learning.

In Central and Eastern Europe for example, resources and capabilities that were vital under the central planning system, were of less relevance in a market economy (Newman, 2000). In a transition economy, an intense management attention over a long time is thus required to achieve the fit between the external environment and the internal capabilities.

2.4. Forces and effects in the privatisation process

According to the research literature, privatisation, competition, regulation and organisational change are the four main forces that exert an influence on the efficiency of the company in the privatisation process. Besides these forces, other variables exist that might affect the performance of the company.

The threat of take-over as well as the threat of bankruptcy can be incentives for managers of private companies. However, their credibility as a threat is dependent on certain conditions. A take-over threat for example can also exist for an efficient company. A take-over may be motivated inter alia by the aspiration for market power or the reduction of tax liabilities (Cavaliere & Scabrosetti, 2008).

During a boom period, the role of the bankruptcy threat – relative to other constraints on managerial behaviour – should be reduced while for example in a period of more intense product market competition or of recession it is likely to be larger (Vickers & Yarrow, 1988). Typically, the threats of take-over and bankruptcy do not exist for state-owned companies. Laws and policies as well as the economic condition may exert a stronger influence on a company in a transition economy than in a developed country.

The laws and policies that apply in a country may also influence the performance of the company. Labour law for example typically outlines the rules concerning the dismissal of employees, minimum wages or the utilisation of contract labour. Commercial law and administrative laws (e.g. concerning environmental protection or subsidies) as well as the trade, monetary and fiscal policies usually affect the performance of the company and the industry as a whole.
The economic condition can also influence the efficiency of the company and can be represented inter alia by the rate of inflation, the purchasing power, the foreign exchange rate, the unemployment rate, the foreign trade balance and the economic growth rate. A high unemployment rate coupled with a low purchasing power might for example make a price increase more difficult.

3. Results

The objective of this research has been to determine all the forces and effects that affect the efficiency of a privatised company. The focus was not only on static, but also on dynamic efficiency. Several variables that reveal the influence of the forces and effects on efficiency were examined in the case studies. For both companies, financial and other publicly available data for a period of more than 20 years were analysed. Due to the limited space of this article, only a few variables can be presented here.

Based on the research literature, a model was developed that intends to reflect all major forces and effects in the privatisation process. It is presented in figure 1. Four forces that exert a direct influence on the efficiency of the company form the basis of the model – “ownership”, “competition”, “regulation” as well as “organisation and strategy”.

In addition, the four effects “bankruptcy threat”, “take-over threat”, “laws and policies” and “economic condition” may also exert an influence on the performance of the company. These forces and effects were analysed in the case studies.

Deutsche Telekom became incorporated as a joint stock company on 2 January 1995 (completely owned by the federal state). In 1996, it launched its Initial Public Offering (IPO). The German telecommunications market was fully liberalised as of 1 January 1998. The privatisation of Deutsche Telekom led already to a significant reduction in the number of employees as can be seen in figure 2. Overall, the number of domestic employees fell from 213,467 in 1995 to 101,901 in 2017.
Figure 1. The four forces of efficiency model

Source: Author view

Figure 2. The development in the number of employees

Source: Author, based on data source: Deutsche Telekom, 2018; Telekom Romania, 2017
The liberalisation of the fixed line voice services in 1998 led to dramatic falls in call charges. Especially, the prices for long distance and international calls fell significantly at Deutsche Telekom. Its prices for local calls had been internally subsidised and thus did not fall as dramatically as the ones for long distance and international calls. The respective price development is displayed in figure 3.

As can be seen in figure 4, competition did not only exert a strong pressure on the prices for fixed line services, but also on the ones for mobile services. While in 1996 the prices for fixed network and internet services rose, the liberalisation of the fixed line market in 1998 led to significant decreases already in 1997.

The general trend for fixed line and mobile services has been downwards. Only in 2002 and 2003 some price increases are evident. They can be attributed inter alia to Deutsche Telekom’s rises in the monthly price for fixed line subscription in 2002 and 2003 as well as to increases of the prices for SMS messages in 2002 by mobile providers.

Regulation has raised the pressure for the company to increase its static efficiency. However, regulation seems to have exerted a negative influence on dynamic efficiency.

Low wholesale prices and advantageous conditions for competitors of Deutsche Telekom foster competition, but do not necessarily raise dynamic efficiency.
The current regulatory regime does not offer strong incentives for Deutsche Telekom and for the competitors to invest into the infrastructure.

Figure 4. Development of the prices for telecommunication services in Germany

The privatisation has led to some organisational changes within Deutsche Telekom, but the largest modifications can be attributed to the introduction of competition. Significant adaptations concerning the organisational structure, processes and labour relations have occurred in relation to competition and regulation.

The effect variables do not seem to have influenced the company considerably. No reliable correlation between these variables and the performance could be found. However, it cannot be completely discarded that an influence might exist.

Telekom Romania was established as a joint stock company on 1 November 1997 (at that time its company name was Romtelecom). In 1998, the Greek telecommunications company OTE acquired 35 per cent of its share capital via its subsidiary.
OTE also purchased in addition 16 per cent of voting rights in the ordinary shareholders meeting. In 2003, OTE acquired the share majority.

The telecommunications market in Romania was fully liberalised on 1 January 2003. New market players gained quickly a solid market share in the fixed line market as can be seen in figure 5. In 2017, alternative fixed line telephone providers held a market share of 55.5 per cent.

Figure 5. Market share of alternative fixed telephone providers in Romania

Source: Author, based on data source: Ancom (2018)
(Note: from 2006 onwards, data is based on the number of subscribers; before, on the number of access lines)

Figure 6. Telekom Romania – Prices for fixed line calls based on a 10-minute call at 11 am (including VAT) on a weekday

Source: Author, based on data source: European Commission, 2018
The prices for local and international calls were raised before the liberalisation of the fixed line market - see figure 6. However, especially the prices for long distance and international calls dropped significantly after the introduction of competition. Unfortunately, the data is only available for the years 2000-2010.

Regulation has also led to a strong influence on the efficiency of the company. Initially, the regulatory activities concentrated on the wholesale and retail markets. It led inter alia to strong reductions of crucial wholesale rates (e.g. fixed termination rates) that Telekom Romania charges its competitors.

By now, several regulations concerning the wholesale and retail markets have been decreased as markets moved towards effective competition.

The investment pattern of Telekom Romania displays two major peaks – as can be seen in figure 7. The first peak can be seen in the period 1999-2001. The company invested strongly in the digitalisation of its fixed line network and in a faster connection for applicants waiting in rural areas from 1999 onwards. It also developed its broadband internet and satellite TV services in the years 2005-2007 (Nae & Turnock, 2009). The investments in the period 2005-2007 form the second peak.

Competition has forced Telekom Romania to invest massively into property, plant and equipment. However, in the years 2010-2016 the investment level has been below the 200 million USD threshold in each of these years.

Figure 7. Investments of Telekom Romania in property, plant and equipment

Source: Author, based on data source: Romtelecom, 1999-2009; Telekom Romania, 2017
Privatisation has led to some organisational changes and thus to the increase in internal efficiency.

However, as in the case of Deutsche Telekom, the impetus for profound changes within the organisation has been derived from the introduction of competition and regulation. The company launched a major restructuring programme in 2003. Further projects that inter alia modified the organisational structure and streamlined processes were initiated in the subsequent years. The number of employees within Telekom Romania fell from 53,759 in 1995 to 5,703 in 2016.

The effect variables have influenced Telekom Romania to a larger extent than Deutsche Telekom. While the take-over threat and the bankruptcy threat do not display a strong effect especially due to the majority ownership by OTE and the importance of Telekom Romania’s infrastructure, the laws and policies as well as the economic condition have exerted an influence during Romania’s transition period. Laws and policies were modified after 1989 as to provide a market economy. They have exerted a positive effect on the economy. On the other hand, the economic conditions in Romania have been severe especially in the 1990s and early 2000s. The Gross Domestic Product dropped for example by 12.9 per cent in 1991 and by 8.8 per cent in 1992.

The consumer prices rose by 210 per cent in 1992 and by 256 per cent in 1993. Only from 2005 onwards, the inflation rate has been below 10 per cent again.

4. Discussion, and Conclusions

A successful privatisation is dependent on several factors. As the case studies of Deutsche Telekom and Telekom Romania disclosed, all four forces (ownership, competition, regulation and organisational change) of the model influence the efficiency and thus the performance of the organisation.

According to the case studies, privatisation leads to an increase in internal efficiency. However, a private monopoly typically does not lead to allocative efficiency – it could be detrimental to consumers due to higher prices and a lower service quality. Overall, competition has been a stronger force for static efficiency than privatisation in both case studies.

The liberalisation of the telecommunication markets also led to a thrust for major innovations in this sector. Regulation has also been a substantial force for static efficiency in the analysed companies.
Furthermore, the case studies revealed that the adaptations of organisational structures, strategies, goals and processes have led to an increase in internal efficiency in both companies.

However, a trade-off between static and dynamic efficiency is apparent in the telecommunications industry. The present EU regulation does not seem to encourage investments into the access infrastructure.

The differences between privatisations in transitional and developed economies are visible in the effect variables. The latter have played a significant role only in the case study of Telekom Romania. In developed economies, they seem to influence the performance of the company only under certain, special circumstances which are well-documented in the literature.

Forces and effects vary over time. This cannot be reflected in the current model and is thus an area for future research.

References


