



European
Commission

ISSN 2443-8014 (online)

State-Owned Enterprises in the EU:

Lessons Learnt and Ways
Forward in a Post-Crisis
Context

INSTITUTIONAL PAPER 031 | JULY 2016

EUROPEAN ECONOMY



Economic and
Financial Affairs

European Commission

Directorate-General for Economic and Financial Affairs

State-Owned Enterprises in the EU:

Lessons Learnt and Ways Forward in a Post-Crisis Context

CONTENTS

Executive Summary	1
Part I: State-owned enterprises in the EU: an overview	3
Overview	5
1. The relevance and performance of state-owned enterprises in the european economy	6
1.1. Role and objectives of state-owned enterprises	6
1.2. Definition of state-owned enterprises	6
1.3. Importance of state-owned enterprises	7
1.4. Evolution of performance in selected network sectors (energy and rail)	8
1.5. Evolution of performance of firms in selected New Member States	9
2. State-owned enterprises and fiscal implications	11
2.1. The links between state-owned enterprises and public finances	11
2.2. Contingent liabilities associated with state-owned enterprises	13
3. Reforming state-owned enterprises	17
3.1. Reforming state-owned enterprises	17
3.2. Economic rationale of the performances of state-owned enterprises	17
3.3. Modalities of the reforms of state-owned enterprises	18
3.4. Intrinsic difficulties of the reforms of state-owned enterprises' reforms	21
4. Conclusions	23
Part II: Economic performance of state-owned enterprises: an empirical analysis in selected sectors and Member States	25
Overview	27
1. Performance of state-owned enterprises in the energy and railway sectors	28
1.1. Recent evolutions in energy and rail	28
1.2. Literature review: theoretical and empirical findings on the performances of state-owned enterprises	31
1.3. Empirical analysis of firm ownership and financial performance	32
1.4. Conclusions	40
A.1. Acronyms	42
A.2. Econometric results	43
2. Performance of state-owned enterprises in selected new Member States	47
2.1. Introduction	47
2.2. Data	48
2.3. Ownership and economic performance of firms in selected New Member States	49
2.4. Allocative efficiency and state ownership	55
2.5. Relative impact of privatisations on performance	56
2.6. Conclusions	58
A.3. Econometric results	60

Part III: Selected country profiles	67
Overview	69
1. Croatia	70
1.1. Background	70
1.2. Main issues identified	70
1.3. Reform efforts and remaining challenges	71
2. Italy	73
2.1. Background	73
2.2. Main issues identified	73
2.3. Reform efforts and outcome	74
2.4. Remaining challenges	75
3. Lithuania	76
3.1. Background	76
3.2. Main issues identified	77
3.3. Reform efforts and outcome	77
3.4. Remaining challenges	78
4. The Netherlands	79
4.1. Background	79
4.2. Main issues identified	79
4.3. Reform efforts and remaining challenges	80
5. Portugal	81
5.1. Background	81
5.2. Main issues identified	81
5.3. Reform efforts and outcome	82
5.4. Remaining challenges	84
6. Romania	85
6.1. Background	85
6.2. Main issues identified	85
6.3. Reform efforts and outcome	85
6.4. Remaining challenges	87
7. Sweden	88
7.1. Background and main issues identified	88
7.2. Reform efforts and outcome	89
7.3. Remaining challenges	89
8. Slovenia	91
8.1. Background	91
8.2. Main issues identified	91
8.3. Reform efforts and outcome	92
8.4. Remaining challenges	94
9. United Kingdom	95
9.1. Background and main issues identified	95
9.2. Reform efforts and outcome	95
9.3. Remaining challenges	96
References	97

LIST OF TABLES

II.A1.1.	Sector acronyms	42
II.A2.1.	Estimation output for the electricity subsectors	43
II.A2.2.	Estimation output for the gas subsectors and energy conglomerates	44
II.A2.3.	Estimation output for the rail subsectors and conglomerates	45
II.A2.4.	Overview of sample size for the different estimations	46
II.2.1.	Dependent variable: $\ln(TFP)$, whole period	53
II.2.2.	Dependent variable: return on equity (winsorized), whole period	54
II.2.3.	AE and SOE	56
II.A3.1.	Sectors included in the estimations	60
II.A3.2.	Return on equity and state ownership (dep. variable: ROE)	61
II.A3.3.	Debt and state ownership (dep. variable: Debt/EBITDA)	62
II.A3.4.	TFP and state ownership (dep. variable: $\log TFP$)	63
II.A3.5.	Labour productivity and state ownership (dep. variable: \log labour productivity)	64
II.A3.6.	Allocative efficiency and state ownership (dep. variable: sector allocative efficiency)	65
III.3.1.	Key figures (2014)	76
III.7.1.	Divestments and dividends of state-owned companies (2007-2013)	88

LIST OF GRAPHS

I.1.1.	OECD Scope of SOEs Index in EU Member States	7
I.1.2.	Market value of central SOEs, % of GDP	8
I.1.3.	Employment in central SOEs, % of total employment	8
I.1.4.	Financial performance of firms in the energy and rail sectors	9
I.1.5.	Return on Equity, SOEs and Private firms	10
I.2.1.	Government's participation in the capital of corporations, % of GDP (2014 or latest)	12
I.2.2.	Liabilities of Public Corporations by controlling Government level, 2014 or latest, % of GDP	14
I.3.1.	Direct control over business enterprise index	17
II.1.1.	Breakdown by ownership structure of total turnover, 2008-2013	30
II.1.2.	SOEs and MOEs in regulated and non-regulated sectors, share of total turnover	31
II.1.3.	Public ownership in the network sectors, 2013	34
II.1.4.	Financial performance of firms in the energy infrastructure subsectors	35
II.1.5.	Financial performance of rail infrastructure operators	35
II.1.6.	Financial performance of firms in the non-regulated energy subsectors	36
II.1.7.	Financial performance of freight and passenger railway undertakings	36
II.1.8.	Financial performance of the energy conglomerates	36
II.1.9.	Financial performance of rail conglomerates	37
II.1.10.	Operating costs-to-turnover ratio (relative value of SOEs versus privately held entities)	39
II.1.11.	Return on capital employed (relative value of SOEs versus privately held entities)	40
II.1.12.	Share of staff costs in OPEX (relative value of SOEs versus privately held entities)	40
II.1.13.	Equity-to-assets ratio (relative value of SOEs versus privately held entities)	40
II.1.14.	Investment ratio (relative value of SOEs versus privately held entities)	40
II.2.1.	Return on equity (pp. difference between state-owned enterprises and private firms)	50
II.2.2.	Debt-to-EBITDA (pp. difference between state-owned enterprises and private firms)	50

II.2.3.	Total factor productivity (% difference between state-owned enterprises and private firms)	51
II.2.4.	Labour productivity (% difference between state-owned enterprises and private firms)	51
II.2.5.	Allocative efficiency and fraction of workers employed in state owned enterprises	55
II.2.6.	Average relative return on equity of privatized companies (time0=year of privatization)	57
II.2.7.	Median relative return on equity of privatized companies (time0=year of privatization)	58
II.2.8.	Average relative return on assets of privatized companies (time0=year of privatization)	58
II.2.9.	Median relative return on assets of privatized companies (time0=year of privatization)	58
III.1.1.	Share of SOEs by sector	70
III.3.1.	SOE portfolio - estimated market value in billion EUR (2014)	76
III.3.2.	SOE portfolio - normalised net profit in million EUR	76
III.3.3.	SOE employees	76
III.5.1.	Turnover, assets and indebtedness by sector (2014)	81
III.5.2.	Income statement and balance sheet of SOEs	82
III.6.1.	The importance of SOEs	85
III.7.1.	Valuation of SOE portfolio by sector in 2014 (%)	88
III.7.2.	Net profit of SOEs with most significant impact on earnings, Jan-June 2015 (billion SEK)	88

LIST OF BOXES

I.1.1.	Financial performance of state-owned enterprises in energy and rail	8
I.2.1.	Links between state ownership in SOEs and government's budgetary position –	13
I.2.2.	Fiscal and economic implications of state ownership in Slovenia	15

ABBREVIATIONS AND SYMBOLS USED

COUNTRIES

AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia

SK Slovakia

UK United Kingdom

OTHERS

CEE Central Eastern European countries

CEO Chief Executive Officer

CSR Country Specific Recommendation

EA Equity-to-Assets ratio

EBITDA Earnings before interest, taxes, depreciation and amortization

EU European Union

EUR Euro

GDP Gross Domestic Product

IMF International Monetary Fund

IPO Initial Public Offering

MOE Minority-SOE

NACE Statistical Classification of Economic Activities in the European Community

NFC Non-financial corporations

OECD Organisation for Economic Co-operation and Development

OPEX Operating Expenses

PSO Public Service Obligation

ROE Return on Equity

SEK Swedish Krona

SOE State Owned Enterprise

SPO Secondary Public Offering

TFP Total Factor Productivity

USD US Dollar

EXECUTIVE SUMMARY

State-Owned Enterprises (SOEs) are companies where the state exercises control.

State-Owned Enterprises (SOEs) are those companies where, for various reasons, the state exercises control. The ownership arrangements and the governance structures vary across countries and sectors. On one extreme, the government may own only a minority share and the company enjoys relative managerial and organizational autonomy; on the other side of the spectrum, companies may be fully owned by the state and follow instructions from their line Minister. SOEs often combine commercial and non-commercial objectives. Several socio-economic, political and historical reasons explain why governments have established and maintained state-owned enterprises over the past decades. However, recent experience has shown that SOEs can be an important source of concerns in at least three areas: market functioning, public finances and financial stability. The objective of this report is to analyse recent developments of SOEs in the EU, to assess past and future challenges and identify best practices with reform efforts.

SOEs are important in the economy, in particular in network industries and in some new Member States.

SOEs account for a large part of assets and employment in developed economies. Majority-owned SOEs account for about USD 2 trillion of assets and more than six million jobs in the OECD member countries combined (OECD, 2011). SOEs play a particularly important role in the network industries. The OECD estimated that in value terms SOEs active in the energy and transport sectors count for about 40% of the total value of SOEs and about 43% of total SOE jobs. In Europe the scope of public ownership in various sectors of the economy is particularly extensive in some of the new Member States such as Poland, Croatia, Romania and Slovenia. However, SOEs prominently feature also in some EU15 Member States such as France, Italy and Sweden.

SOEs have been resilient to the crisis....

At EU level the profitability of SOEs in key network sectors like energy and railways remained positive and rather stable throughout the crisis, although difference exist at national and sub-sectoral level. When looking at the new Member States where SOEs are more dominant across various economic sectors, the return on equity in private firms is in most cases substantially higher than in SOEs. However, the profitability of public companies appear to have been more resilient to the crisis.

... and their performance has an impact on public budget

While governments' participation in corporations may be beneficial for Member States' budgets, it could also lead to direct budgetary costs, in particular when companies are loss making or are run inefficiently. Certain recently established reporting obligations have enhanced the transparency regarding the nexus of public corporations and states' budgets. However, data availability is still limited and not uniform across Member States. Going forward, increased compliance with reporting obligations would enable a better monitoring of potential risks for public finances.

The principal objective of SOE reform should be to improve accountability and efficiency.

Consequently, the governance of SOEs is important for their performance, and their impact on public budget. An important distinction between the commercial and non-commercial objectives of SOEs is needed and can be made by setting transparent targets. Thereafter, adequate reporting of SOE performance is a crucial step towards these targets. SOE objectives often go beyond mere profit maximization and include societal objectives. As such an accountability framework is needed to monitor their effectiveness vis-à-vis such non-financial targets. Moreover, it is essential to recruit management with appropriate background, independence and professional expertise,

particularly when the company has purely commercial goals, and to ensure appropriate auditing.

Privatisation should in most cases be accompanied by market reform.

Modifications of the regulatory framework have important implications for SOEs as the exposure to increased competition provides incentives for better management and efficiency gains. This is particularly important in the network industries where high entry costs have often resulted in incumbents adopting a dominant position. Some lessons learnt from past privatization experience suggest that transferring public monopolies into private hands may incentivise rent-seeking.

The rest of this report provides an in-depth analysis on SOEs performances and country fiches on selected Member States

In the network sectors SOEs and private companies display comparable performances...

In most Member States, SOEs are still significant players in the energy and rail sectors as these sectors have only recently been open to competition. The share of SOEs in regulated and competitive segments is still high in the majority of Member States. The analysis of their performance does not suggest any overall systematic difference between private and state-owned companies, except in some market segments where the difference nevertheless remains small.

...while the gap is evident in the manufacturing sectors in new Member States ...

In New Member States, while profitability and productivity of SOEs tend to be lower than that of private firm across all sectors analysed, the gap is particularly evident among companies in the manufacturing sectors. Unlike network industries, these are sectors where there is no public sector provision involved and where SOEs would be expected to operate like private businesses as they face high competitive pressure. An interesting finding is that in the New Member States the gap between the performance of SOEs and private companies tends to become smaller (or statistically insignificant), during the crisis. These dynamics are mostly due to a worsening of the results of the private companies and to a relatively less affected performance of SOEs.

Member States face different reform challenges

Information from selected country profiles illustrates best practices with SOEs management as well as future challenges and avenues for further reform. In new EU Member States, SOEs are often still a dominant feature in many sectors of the economy. This is due to historical legacies. The challenge for these countries is to improve the management of their public companies which face increasing competitions from domestic and global market players. In addition, when deciding to privatize SOEs, these countries need to accompany the transition with adequate regulatory reforms to maximize welfare gains. In the EU15 Member States, SOEs are still often very relevant in network sectors. For these countries, the main challenges relate to the need to ensure a coexistence of SOEs with private players and to implement public service obligations in a transparent and non-discriminatory manner.

Part I

State-owned enterprises in the EU: an overview

OVERVIEW

Recent experience has shown that State-Owned Enterprises (SOEs) can be an important source of concerns in at least three areas: market functioning, public finances and financial stability. Given their economic role, it is important to develop a comprehensive EU-wide overview on SOEs in order to consistently explore the multiple links between SOE performance, government budgets, financial stability and market functioning reforms.

The objective of this part is to identify challenges and further inform the policy implications of reforming SOEs. Chapter 1 is dedicated to a brief overview on the relevance of SOEs in the European economy and a description of the evolution of SOEs performance in the energy and railway sectors and in the new Member States. Chapter 2 discusses the fiscal implications of SOEs and chapter 3 gives an overview of various types of SOEs reforms. Chapter 4 concludes.

1. THE RELEVANCE AND PERFORMANCE OF STATE-OWNED ENTERPRISES IN THE EUROPEAN ECONOMY

State-owned enterprises account for a large share of output and employment in many EU member states. Moreover they are particularly active in network sectors and play an important role in the life of EU citizens and businesses.

This chapter discusses the definition of public ownership. It also provides a brief overview of the importance of SOEs in Member States and present the evolution of the performance of SOEs in the energy ⁽¹⁾ and railway sectors, and of SOEs across all sectors in a selected group of new Member States ⁽²⁾.

1.1. ROLE AND OBJECTIVES OF STATE-OWNED ENTERPRISES

SOEs often combine commercial and non-commercial objectives. Several socio-economic, political and historical reasons explain why governments have established and maintain state-owned enterprises. In industries where conditions are such that it is most efficient if there is only one supplier (natural monopoly) or competition is imperfect, governments have often opted for direct control of the service providers. SOEs have also been established to carry out nationally strategic but risky or long-term investments where private sector investors were not available.

Governments have operated SOEs in key enabling sectors for the rest of the economy, thereby exploiting the externalities of SOEs to benefit other industries or to pursue social objectives. This is for example the case for SOEs providing subsidised or non-profit services. Profit-seeking firms may refuse to provide services to particularly vulnerable consumers or remote areas. Governments have therefore directly intervened for equity reasons: providing a minimum level of access to services which are considered as essential and basic goods. Some firms have become SOEs after governments intervened to save private companies from bankruptcy or in cases where previous administrative units of the

state have been converted into companies to take advantage of the flexibility offered by company law compared with the rigidities of public law. Finally, in some Member States SOEs are the legacies of past political regimes and often extend across a broad range of economic sectors.

1.2. DEFINITION OF STATE-OWNED ENTERPRISES

There is no common definition of what is an SOE. This paper will, as a rule, make use of the definition provided in the ESA2010. The "Public non-financial corporations" subsector consists of all non-financial corporations, quasi-corporations and non-profit institutions, recognised as independent legal entities that are market producers and are subject to control by government units (ESA2010, 2.51). Therefore state-owned enterprises will be hereafter defined as all those non-financial companies where the state exercises control, regardless of the size of ownership. ⁽³⁾.

Some companies that are incorporated into the General Government, due to their non-market nature (e.g. railways infrastructure operators), will however be part of the analyses presented in this report as they operate as service providers sometimes in competition with private companies. Finally, whenever relevant, other possible distinctions may be made between companies where the state controls the total or a majority of the shares and companies where the state has a minority stake, irrespective of other statutory rights. This may be an important distinction since mixed-owned companies may be exposed to stronger market pressure influencing their management.

SOEs can therefore include in particular the following categories:

- companies fully owned by public authorities;

⁽¹⁾ In this chapter the "energy sector" covers the electricity and gas subsectors.

⁽²⁾ Part II of this report provides more comprehensive and in-depth analyses of SOEs performance.

⁽³⁾ Whenever a specific threshold is applied in the analysis, it will be specified in a footnote. Similarly, in some cases, the text will specify that financial corporations are also included in the definition of SOEs.

- companies where public authorities have a majority share;
- companies where public authorities retain a minority share but have special statutory powers;
- companies where public authorities have a minority share and no special powers. These are generally not considered as SOEs however they may be of relevance in order to obtain a fuller picture of governments' stake in the economy.

1.3. IMPORTANCE OF STATE-OWNED ENTERPRISES

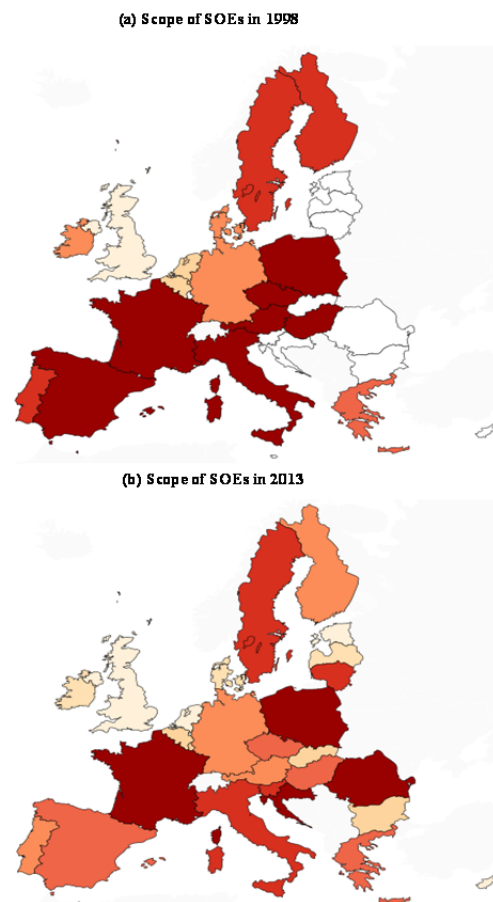
SOEs account for a large part of assets and employment in developed economies. Majority-owned SOEs account for about USD 2 trillion of assets and more than six million jobs in the OECD member countries combined (OECD, 2011). These figures would be even higher if firms with public minority shares were included. As of 2013, about 10% of the 2000 biggest global enterprises listed in Forbes 2000 are majority-owned by public authorities, while this share would be as high as 20% if minority-owned public companies were also considered ⁽⁴⁾.

SOEs play a particularly important role in the network industries. The OECD estimated that in value terms SOEs active in the energy and transport sectors count for about 40% of the total value of SOEs and about 43% of total SOE jobs. The concentrated presence of SOEs in these sectors makes their performance extremely relevant for the determination of spill-overs to the rest of the economy.

In Europe the scope of public ownership in various sectors of the economy is particularly extensive in some of the new Member States such as Poland, Croatia, Romania and Slovenia. However, SOEs prominently feature also in some EU15 Member States such as France, Italy and Sweden ⁽⁵⁾. The evolution over time in most Member States points to a gradual reduction in the scope of public ownership (Graph I.1.1). In terms

of book equity value and employment, SOEs are particularly relevant in Finland, Slovenia, and France and to a lesser extent in Belgium and Latvia (Graph I.1.2 and I.1.3) ⁽⁶⁾.

Graph I.1.1: OECD Scope of SOEs Index in EU Member States



Note: Lighter colours indicate less sectors in the economy in which SOEs are present. White colour indicates data is not available or non-EU

Source: OECD. The underlying index is based on the following question "national, state or provincial government controls at least one firm in: (sectors)". For more details, <http://www.oecd.org/economy/growth/indicatorsofproductmarketregulationhomepage.htm#indicators>

⁽⁴⁾ Cló et al. (2015)

⁽⁵⁾ OECD (2014)

⁽⁶⁾ This index reflects the important analytical work on SOEs that the OECD has carried out. Given the multiple dimensions of SOE policies one should use caution in drawing conclusions on cross-country comparison based on a single indicator. As such the index should be complemented with more in-depth assessments of country-specific policy challenges.

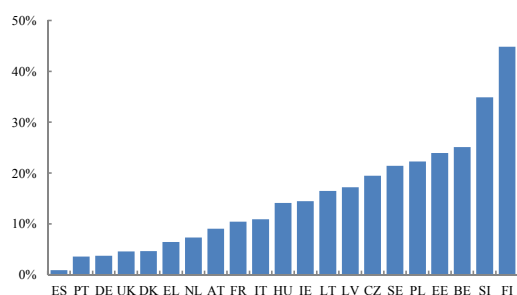
Box I.1.1: Financial performance of state-owned enterprises in energy and rail

A descriptive analysis of SOE performance in energy and railway has been carried out with the aim of analysing the evolution of financial performance of enterprises in the electricity, gas and rail sectors in the period following the crisis. Financial performance is assessed using five indicators ⁽¹⁾: (i) The return on capital employed (ROCE) as a measure of the profitability of companies and the efficiency with which they use their capital, (ii) operating expenditures over turnover as a proxy of the companies' management efficiency ⁽²⁾, (iii) staff costs as a share of operating expenses to provide an indication of the labour-intensity of each company, (iv) the equity-to-assets ratio to measure the financial health of a company, and the investment rate, calculated as the gross investment made in fixed asset per EUR 1 of existing assets.

The analysis is based on observations for 1101 enterprises, covering 14 subsectors and 28 EU Member States for the period 2008-2013. More details on the methodology and data can be found in Chapter II.1 of this report, which presents an in-depth analysis on SOE performance in the rail and energy sectors.

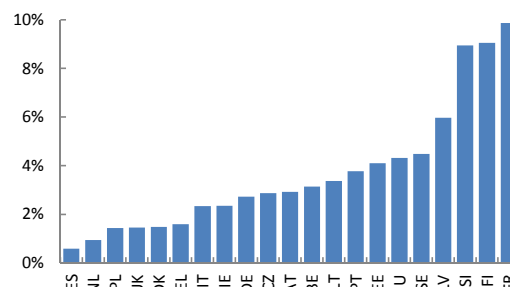
- ⁽¹⁾ The financial data, based on which the financial performance indicators are calculated, cover all activities of the companies and may therefore include related services which are not directly part of the core business of the company.
- ⁽²⁾ Note that for directly awarded PSOs a substantial share of turnover stems from state subsidies, although there are marked differences between Member States in this respect. In the case of such PSOs cases turnover may therefore not fully correspond to output and therefore overestimate cost efficiency. If directly awarded PSOs befall more often on SOEs than on private companies this may thus create a bias in favour of SOEs.

Graph I.1.2: Market value of central SOEs, % of GDP



Source: Own calculations based on OECD, World Bank and Eurostat data

Graph I.1.3: Employment in central SOEs, % of total employment



Source: Own calculations based on OECD, World Bank and Eurostat data

1.4. EVOLUTION OF PERFORMANCE IN SELECTED NETWORK SECTORS (ENERGY AND RAIL)

SOEs account for a large share of total turnover in the energy and railway sectors. Between 2008 and 2012 the share of SOEs ⁽⁷⁾ turnover in total energy turnover was almost 40% in the EU and in some countries it almost reaches 100%. In the railway sector, SOEs represented around 88% of the turnover in the EU over the period 2008-2012.

⁽⁷⁾ For the purpose of the following analysis, firms where the state holds at least 20% of the shares are considered as SOEs.

In several countries in the EU, SOEs represent essentially the entire turnover of the sector.

SOEs in the energy sector have been less resilient to the crisis than SOEs in the railway sector (Graph I.1.1). Profitability - measured by the return on capital employed - was considerably higher for the energy sector at the onset of the crisis at about 10%. However it has dropped by 50% between 2008 and 2013. By contrast, the profitability in the rail sector remained comparatively stable and even shows a slight improvement during the same period.

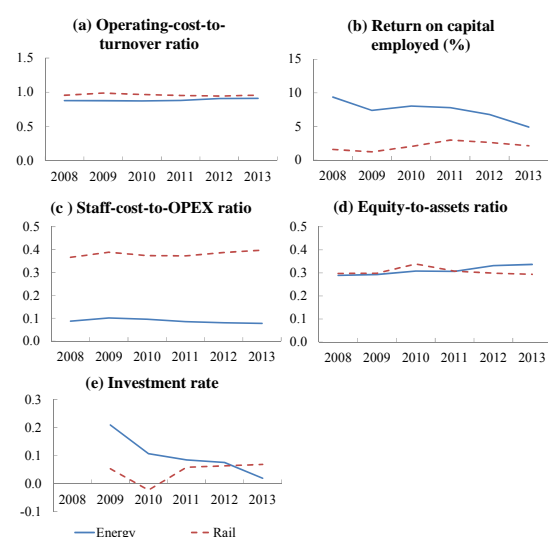
A similar pattern is observed for the investment rate. For SOE in the energy sector the value in 2009 was considerably higher than for SOEs in the rail sector. During the following four years the rate dropped sharply for SOEs in the energy sector, dipping below the rate for rail SOEs, which actually displays an increasing trend over these years.

not show any serious deterioration in terms of efficiency and leverage.

In terms of labour-intensity, as measured by the share of staff costs in operating expenses, there is a marked difference between the two sectors. In the rail sector the share is close to 40%, and remains so during the period 2008-2013, whereas in the energy sector it remains around only 10% during the same period.

An important consideration when interpreting these results, and which emerges also from the literature, is that SOEs in the energy and railway sectors may be expected to pursue multiple objectives which go beyond mere profit maximization. Likewise, given the imperfect competition often found in the network sectors, high profitability may be the result of the degree of market power and therefore translate in higher prices and lower welfare for consumers in the long term.

Graph I.1.4: Financial performance of firms in the energy and rail sectors



Source: Commission services based on ORBIS database

By contrast, the cost-efficiency of SOEs in both sectors remained stable over the period following the crisis. The same holds for SOEs' indebtedness, measured through the equity-to-assets ratio, which remains closely to 0.3 for SOEs in both sectors during the period under consideration. On aggregate therefore SOEs did

1.5. EVOLUTION OF PERFORMANCE OF FIRMS IN SELECTED NEW MEMBER STATES

This section presents a description of SOEs⁽⁸⁾ performance for a broader group of sectors in selected EU countries.⁽⁹⁾ The assessment focuses on a sample of eight New Member States (Bulgaria, Czech Republic, Croatia, Hungary, Poland, Romania, Slovenia, and Slovakia). These have, during their transition from the centrally-planned model, opted for different degrees of residual state involvement in the economy. This group of countries therefore represents an interesting sample for studying the effects of ownership on performance.

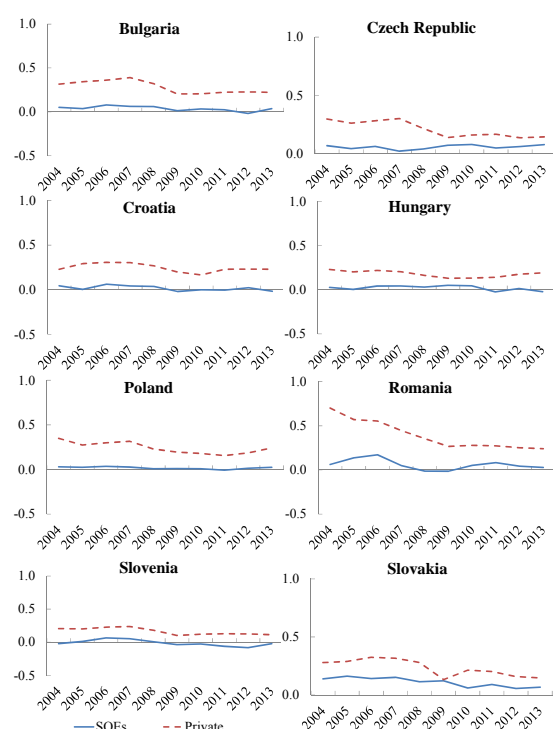
Here again, the financial performance of firms is assessed with the return on equity, which is informative about the firm's profitability. A first

⁽⁸⁾ For the purpose of the following analysis, firms where the state holds at least 20% of the shares are considered as SOEs.

⁽⁹⁾ The sectors are defined according to the following NACE Rev. 2 codes. Consumer staples C10-C18; Chemical industry C19-C21; Metal processing industry C24-C30; Other manufacturing & repair C31-C33; Energy D35; Public utilities: water supply & waste management E36-E39; Construction F41-F43; Transport and storage H49-H52; Tourism I55, I56, N79, R92, R93; Postal services & ICT H53, J61-J63.

inspection of the data is provided in Graph I.2.2. The graph presents the time pattern of the return on equity over the period of investigation (2004–2013) in the eight countries, where a distinction is made between the SOEs and the other firms (i.e. private firms and firms where state ownership is less than 20%; simply referred to as private firms).

Graph I.1.5: Return on Equity, SOEs and Private firms



Source: Orbis

In new Member States, the return on equity in private firms is in most cases substantially higher than in SOEs. It also shows that the return on equity has been reduced in the crisis years especially for private firms, while for SOEs the pattern is more stable over time.

However, in most of the included countries the average return on equity for SOEs turned negative during the crisis period (namely in Bulgaria, Croatia, Hungary, Poland, Romania and Slovenia). Such negative profitability obviously increases the burden on public finances, and raises the question whether this performance gap vis-à-vis the private sector is systematic.

This graph does not imply any causal relationship between ownership and financial

performance, and there may be other factors at play behind the discrepancy in financial performance. Such other important factors will be considered in the econometric analysis in Chapter II.2. Also, next to the return on equity, several other performance indicators will be considered in the econometric analysis, namely indebtedness (measured by the debt to EBITDA⁽¹⁰⁾ ratio), labour productivity and total factor productivity.

While this section has only presented the results for a rather broad definition of state ownership, results do not importantly change when a stricter definition of state ownership is applied (50% of ownership, corresponding to the above definition of majority-SOEs).

Prudence on the interpretation of the ownership variable is warranted. In fact, there may be reasons for a particular firm to be in the public domain which are not here observed and controlled for. Finally, the SOEs that are privatised may be the ones that show already relatively good performance, possibly after undergoing a restructuring process to make the company fit to compete in the marketplace.

⁽¹⁰⁾ Earnings before interest, tax, depreciation and amortization.

2. STATE-OWNED ENTERPRISES AND FISCAL IMPLICATIONS

The economic performance of SOEs has a direct bearing on the government budget. While healthy companies constitute valuable assets for the state, loss-making or overly indebted firms represent liabilities which may require interventions with capital injection or other forms of assistance.

This chapter concentrates on statistical principles that are applied to classification of state-owned enterprises and gives an overview of how the associated financial indicators are reflected in the national accounts

2.1. THE LINKS BETWEEN STATE-OWNED ENTERPRISES AND PUBLIC FINANCES

The public sector is defined in the European System of National and Regional Accounts (ESA 2010) ⁽¹¹⁾ as consisting of resident units controlled by government. This control may be exercised through rights to appoint, veto or remove a majority of the governing board or key personnel; ownership of the majority of the voting interest (most commonly, ownership of >50% of shares); rights under special shares and options; rights to control via contractual arrangement, agreements or permissions to borrow, or via excessive regulation; and other forms of control.

Whether a public sector unit is classified for statistical purposes as part of general government or as part of corporations' sector depends on the nature of the unit – those involved in non-market activities are classified in general government and those involved in market activities are classified as public corporations. The term corporation must be understood here in a broad sense as it may include entities which do not have the legal status of a corporation.

The criteria of control are applied in the same manner for both financial and non-financial public units, but the way their market or non-

market nature is determined is different. Non-financial non-market producers provide all or most of their output to others free of charge or at prices that are not economically significant, i.e. in case of a non-market producer prices do not serve as a substantial motivation for adjusting volumes of supply or demand for goods and services. For financial institutions the classification is based, instead, on whether they place themselves at risk or not by incurring liabilities on their own accounts: as incurring such liabilities is the core feature of a market financial intermediary, public financial units not placing themselves at risk are classified in general government.

If a public sector unit is classified in general government sector, its revenue, expenditure and debt are added to those of the rest of the government sector and thus affect government's balance and debt directly. While this is not the case for public corporations that have a market nature and thus remain outside government's boundary, the long-term impact on government's debt is nevertheless expected to be broadly the same, assuming that surpluses are distributed as dividends and occasional losses are borne by owners.

The availability of information on SOEs is not uniform across the EU Member States but has improved through the implementation of the Council Directive 2011/85/EU. The directive sets out requirements for budgetary frameworks in the Member States, including those related to the availability of information that allows estimating the fiscal risk. Among other things the directive contains a requirement that Member States shall publish information on the participation of general government in the capital of private and public corporations. While this information is published nationally, Eurostat maintains a list of national websites ⁽¹²⁾.

Government's participation in the capital of corporations varies considerably across Member States (Graph I.3.1). The degree of state participation fluctuates from less than 5% of GDP in the United Kingdom, Romania, Denmark and Germany to over 40% in Finland. However, in

⁽¹¹⁾

<http://ec.europa.eu/eurostat/documents/3859598/5925693/KS-02-13-269-EN.PDF>; several of the concepts in ESA 2010 applicable to government are explained in more detail in Manual on Government Deficit and Debt: <http://ec.europa.eu/eurostat/web/government-finance-statistics/methodology/manuals>

⁽¹²⁾

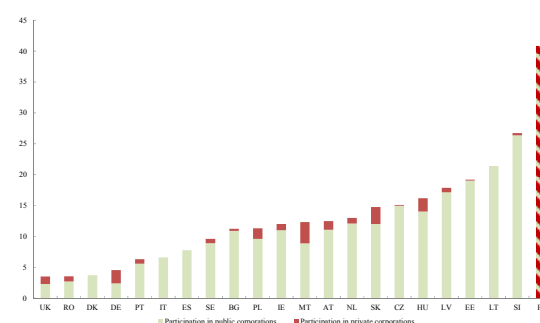
<http://ec.europa.eu/eurostat/documents/1015035/6850409/Listing-of-national-websites.pdf>

Finland social security funds hold large asset portfolios (over a half of the overall amount), which are likely to be predominantly holdings in private corporations, although the split is not available. Data have not been published for six Member States. In line with sector classification principles described above private corporations are those where government participates as one of the owners but does not exercise control. Public corporations are units which are controlled by government and are engaged in market activity. Finally, public corporations involved in non-market activity are not included in this table, because they already form part of general government.

Government's participation in the capital of public or private corporations can be beneficial for public finances.

For example, in Finland general government's revenue from distributed income of corporations amounted to 1.5% of GDP on average between 2005 and 2014; revenue of around 1% of GDP on average was also recorded in some other Member States with relatively high share of government's participation – Sweden, Estonia, Malta, Slovakia and the Netherlands. When interpreting the link between government's participation in the capital of corporations and dividend revenue, one has to recall that the recent financial crisis has in some cases affected statistics, as governments stepped in to become owners of financial sector entities. This has affected government's participation in financial sector corporations for example in Ireland, Latvia, the Netherlands, Spain and in some other countries. Another potential benefit associated with government ownership in companies relates to the possibility of privatisation: although sale of government's financial assets does not have an effect on government's deficit, it can have a debt-reducing impact through reducing government's financing needs.

Graph I.2.1: Government's participation in the capital of corporations, % of GDP (2014 or latest)



Note: data not published for Belgium, Cyprus, Croatia, France, Greece and Luxembourg. For Finland the breakdown into public and private corporations is not available, but half of the assets (20% out of 40.7%) represents holdings of social security funds, which are likely to be predominantly holdings in private corporations
Source: National websites, extraction as of May 2016

At the same time, participation in the capital of public corporations comes at a cost and can also represent a potential liability for the government. When setting up an SOE, governments have to weigh benefits of their direct involvement against tying up capital in the public corporation, which would be reflected in higher EDP debt, if financed by new borrowing. Furthermore, potential costs may not be limited to the initial set-up of the public corporation: when the corporation is experiencing temporary difficulties or in case the corporation is failing, the government as a controlling entity or a majority owner may need to step in. This intervention need cannot in most cases be quantified in advance, however, as the probability of occurrence and its impact are not known. The liability is thus contingent, i.e. it may develop into an actual liability if some specific event occurs. A government's decision to intervene may also be triggered by other reasons than financial difficulties: for example, in case of a planned privatisation of a public company, government may decide to "clean" its balance sheet by assuming certain obligations, including obligations of an occupational pension scheme.

Box I.2.1: **Links between state ownership in SOEs and government's budgetary position –
an example from Estonia**

Estonia is a Member States with a relatively high share of state participation in the capital of public and private companies, respectively 19.0% and 0.2% of GDP according to the information published in the context of the Fiscal Frameworks Directive (Graph I.3.1). The annual accounts of the state (available in Estonian on the website of the Ministry of Finance of Estonia ⁽¹⁾) provide a good example of transparency by listing all companies with the participation of the central government, together with the state's share and companies' financial information. According to this list, the Estonian government was in 2014 full or majority owner of several principal infrastructure companies active in the energy sector (notably Eesti Energia and Elering), in the maritime transport sector (notably Port of Tallinn), in the railway sector (notably Estonian Railways) and in the air transportation sector (notably Estonian Air and Tallinn Airport).

The companies in state ownership have predominantly been profitable, which is reflected in the fact that dividends received by general government improved budgetary position by 0.9% of GDP on average between 2005 and 2014, being a relatively stable source of income for the budget. On the other hand, the national airline Estonian Air, where the state owned 97% of shares, has experienced difficulties in recent years and the government made capital injections into the company for an amount of EUR 17.9 m (0.1% of GDP) in 2010 and EUR 30 m (0.2% of GDP) in 2011 in order to restore the stock capital of the company; these transactions were considered to have an unrequited nature, i.e. an expenditure from the point of view of public finances. In addition, a debt cancellation towards Estonian Air was decided by the government in 2014, reducing general government's surplus in that year by EUR 37 m (0.2% of GDP). The company went into liquidation in late 2015.

⁽¹⁾ <http://www.fin.ee/riigi-raamatupidamine>

When governments make a capital injection into a public corporation, there is a need to establish whether this has a nature of an addition to equity (which is recorded as a financial transaction without an impact on deficit) **or a nature of an unrequited payment** (which is recorded as a non-financial transaction with an impact on deficit). The latter often reflects materialisation of government's contingent liabilities related to public corporations. Transactions like debt cancellations, debt assumptions, guarantee calls etc. have clear nature of unrequited transfers ⁽¹³⁾; the same applies to cases when there is a mismatch between assets and liabilities related to occupational pension schemes taken over by government. However, government providing funds in its capacity as a shareholder, even in the context of occasional losses, requires more analysis; the aim is to establish whether government receives something of equal value in exchange and is expecting to earn sufficient rate of

return on its investment through dividends or higher value of its assets ⁽¹⁴⁾.

2.2. CONTINGENT LIABILITIES ASSOCIATED WITH STATE-OWNED ENTERPRISES

The recently published time series on liabilities of government controlled entities classified outside general government ⁽¹⁵⁾ provide a first step to analysing the possible impact on government's finances of the participation in public corporations.

Gross liabilities of public corporations are much higher in countries where governments control financial institutions (Graph I.3.2); in case of Germany these mostly relate to liabilities of public saving banks and development banks,

⁽¹⁴⁾ The application of "the capital injection test" is described in section III.2 of the Manual on Government Deficit and Debt.

<http://ec.europa.eu/eurostat/documents/3859598/7203647/KS-GQ-16-001-EN-N.pdf>

⁽¹⁵⁾ See <http://ec.europa.eu/eurostat/web/government-finance-statistics/contingent-liabilities> under

⁽¹³⁾ State-aid rules shall be respected also for SOEs.

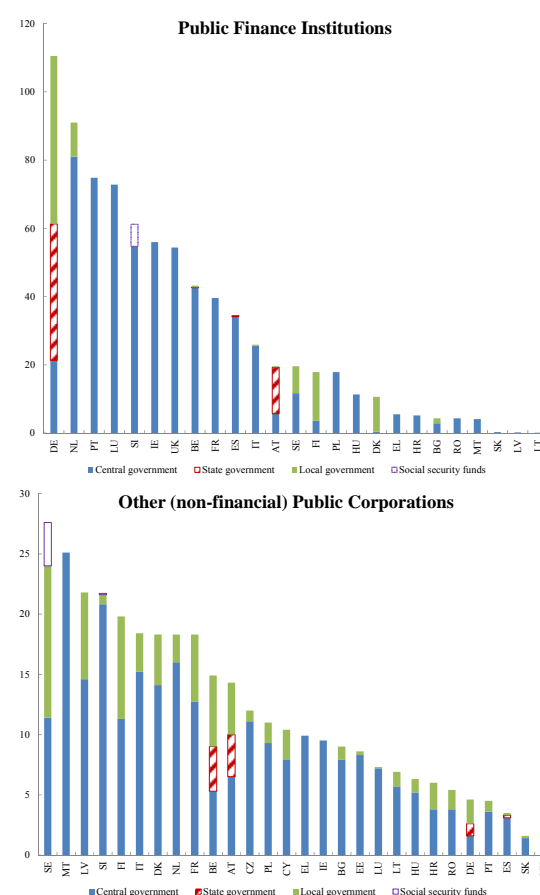
while in case of the Netherlands, Portugal and some other Member States they mostly relate to liabilities of financial institutions where government's control was a result of interventions in the context of the recent financial crisis. On the other hand, liabilities of other (non-financial) corporations also show rather high degree of variability and usually represent liabilities of public companies operating in energy, transport and utilities sectors ⁽¹⁶⁾.

Interpreting government's contingent liabilities associated with participation in financial and non-financial public corporations represents rather diverse challenges. Financial sector institutions tend to have large balance sheets and thus also large liabilities, but their obligations are usually counterbalanced by assets of a comparable size; moreover, financial institutions – public and private alike – are covered by specific regulations like prudential supervision, deposit insurance etc., which reduce the need for owner intervention. With regard to public non-financial corporations, it is usually not known whether the extent of government's possible intervention would be limited to covering the losses recorded by the public company, or whether the government will also take over other liabilities, for example pension obligations

Outstanding liabilities of public corporations thus provide only the first step into estimating the extent of fiscal risk associated with participation in the capital of SOEs. For example, in case of a well-managed and profitable company the probability of any costs for the state is remote and the fiscal risk is thus negligible, but the risk will increase should the company become loss-making. The dataset available on Eurostat's website also contains statistics on liabilities of loss-making public corporations, but the extent of time series is currently limited (and moreover subject to some country-specific gaps). Since companies experiencing occasional losses may drop in and out of reporting in any specific year,

drawing conclusions on the basis of short time series could be misleading. In addition, total liabilities of (loss-making) public corporations represent the maximum possible extent of government's involvement, rather than the most likely scenario, as in most cases it can be assumed that the government would not go as far as covering all the liabilities of an SOE in financial difficulties.

Graph I.2.2: **Liabilities of Public Corporations by controlling Government level, 2014 or latest, % of GDP**



Note: The dataset was first published in February 2015 and updated in January 2016 but data remains non-exhaustive for a number of countries limiting the comparability across countries. Liabilities of public corporations involved in financial activities are not reported for Cyprus and are not exhaustive for some other Member States; liabilities of public corporations controlled by local governments are not reported for Ireland and Malta. For detailed overview of country-specific coverage see: <http://ec.europa.eu/eurostat/documents/1015035/6611302/Contingent-Liabilities-Footnotes.pdf>

Source: Eurostat

⁽¹⁶⁾ It should be kept in mind that the graphs only refer to liabilities of corporations that are classified outside general government for the purposes of national accounts, whereas public corporations of non-market nature are included in the perimeter of the general government and their liabilities add directly to general government's debt. Some gaps in reporting limit the comparability of information across countries.

Box 1.2.2: Fiscal and economic implications of state ownership in Slovenia

The total fiscal and economic implications of state involvement in the economy for the period 2007-2014 are estimated at over EUR 13 bn or just over one third of 2013 GDP. The total fiscal and economic implications of majority-SOEs/minority-SOEs is considered as the sum of a number of transactions estimated in the following categories: (i) state interventions related to the rehabilitation of the banking sector ⁽¹⁾, (ii) foregone profits of majority-SOEs/minority-SOEs when compared to overall profitability achieved for all NFCs by sector ⁽²⁾, (iii) subsidies paid by the state to companies which either became insolvent, or need external support to maintain operational profitability, (iv) equity increases of majority-SOEs/minority-SOEs paid directly by the state, (v) drawn guarantees, and (vi) debt assumptions by the state.

The potential future fiscal implications stemming from the drawing of outstanding guarantees and other contingent liabilities are not included in the number. While by far the largest portion of the costs is due to financial sector stabilisation measures (44% of total and 16% of GDP), considerable amount was also associated with wider economic implications in terms of foregone profits of majority-SOEs/minority-SOEs compared to their private peers (38% of total and 14% of GDP). The former has no direct impact on public finances and is estimated just to demonstrate the amount of lost value added for the state and the economy. EUR 8.3 bn (62% of the total and 22% of GDP) have direct budgetary impact – either through increase of government deficit, debt or both in most of the cases (Table 1).

Table 1: Total fiscal and economic implications of financial and non-financial majority-SOEs/minority-SOEs in Slovenia

	2007	2008	2009	2010	2011	2012	2013	2014	Cumulative (2007-2014)	Cumulative (% of 2014 GDP)
Total fiscal and economic implications from state intervention	1.167	1.268	1.425	842	1.342	1.013	5.18	1.151	13.389	36%
as a % of GDP	3.3%	3.3%	3.9%	2.3%	3.6%	2.8%	14.3%	3.1%		
with direct impact on public finances (debt, deficit or both)	291	418	413	321	800	291	4.168	1.151	8.304	22%
as a % of GDP	0.8%	1.1%	1.1%	0.9%	2.2%	0.8%	12.8%	3.1%		
with wide economic impact (forgone profit)	877	849	1.012	521	542	723	562	0	5.085	14%
as a % of GDP	2.5%	2.2%	2.8%	1.4%	1.5%	2.0%	1.6%	0.0%		

Source: The Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJPES), Ministry of Finance

One third of the increase of public debt from 2007 to 2014 can be attributed to state interventions related to financial and nonfinancial SOEs. Slovenia's gross consolidated government debt almost quadrupled from 2007 to 2014 (from EUR 7.9 bn to EUR 30.3 bn at the end of 2014). In terms of GDP it increased from 22.7% to 82.2%. One third of this increase (EUR 8.3 bn or 21 percentage points) was due to costs related to majority-SOEs/minority-SOEs, such as capital injections, debt forgiveness, and drawn guarantees, as well as EUR 1.5 bn of Bank Asset Management company (BAMC) bonds issued to enable the transfer of NPLs to the BAMC (Graph 1, left panel). In addition, government deficit was also negatively impacted, particularly by the recapitalisations of the state-owned and state-controlled banks during the crisis (Graph 1, right panel).

⁽¹⁾ This takes into account all direct capital/ equity increases of state-owned or state-controlled banks done by the state from 2007-2014, including the conversion of CoCo bonds (contingent convertible bonds, converted into cash if certain conditions are fulfilled) and other hybrid bonds issued by the state. It does not include the support provided to Probanka and Factor banka as these were not state owned before they were recapitalised by the state. It is reduced by dividends paid and any gains from initial public offering (IPO) and secondary public offering (SPO) transactions for the period 2007-2014. It also includes the cost of setting up the BAMC (EUR 1.7 bn in equity and bonds) as this is consolidated with general government accounts following, according to Eurostat treatment.

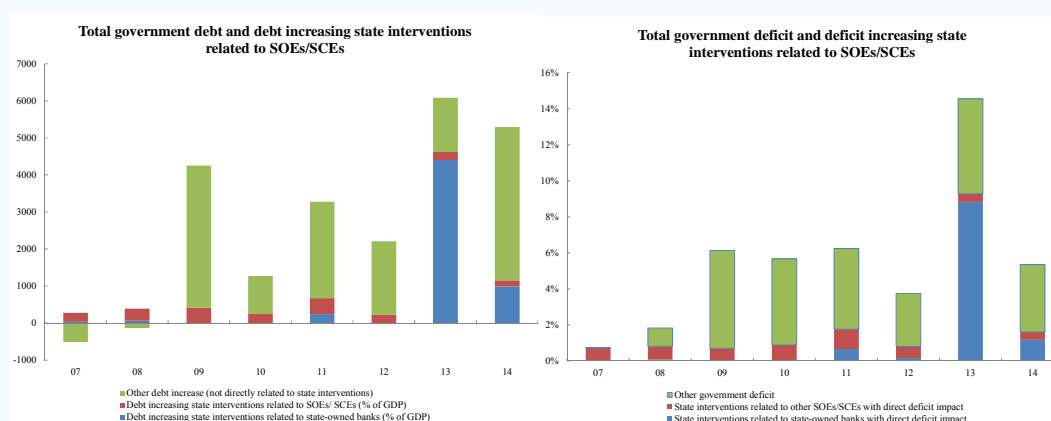
⁽²⁾ Foregone profits are estimated by comparing the profitability of majority-SOEs/minority-SOEs to profitability of all corporates in each sector (as listed in Table 1). In sectors where majority-SOEs/minority-SOEs are dominant and their position is based on natural monopolies), comparing profitability to national peers is not relevant and hence the sector has been excluded from the estimate (e.g. public utilities). Foregone profits in the energy sector are based on comparison with regional majority-SOEs/minority-SOEs peers, using data from Orbis database. Foregone profits are calculated by measuring the difference between ROE of majority-SOEs/minority-SOEs and ROE of the all companies in each sector and multiplying this difference with the equity of majority-SOEs/minority-SOEs in each of the years. The same approach is applied to net margins and sales of majority-SOEs/minority-SOEs and finally the average based on ROE and net margin differences is taken as the cost of foregone profits.

(Continued on the next page)

Box (continued)

Majority-SOEs/minority-SOEs continue to pose considerable fiscal risks. About EUR 6.4 bn of contingent liabilities to the state budget are currently outstanding in the form of guarantees (18% of 2013 GDP). The significant state involvement in the economy in terms of SOE's high share in total assets, equity and liabilities of the corporate sector, particularly in the banking and insurance sector, increase the risks to public finances in the future.

Graph 1: Composition of Total Government Debt and Deficit



Note: The graph assumes that debt is issued in the same year as interventions take place

Source: The Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJPES), Ministry of Finance database, Chamber of Commerce of Slovenia calculations, European Commission

In recent years, a large number of Member States have incurred costs related to financial sector stabilisation, both in related to public and private banks (with the number of public banks in Europe increasing as a result of the crisis). In several Member States (Cyprus, Estonia, Latvia, Malta and Slovenia) government's deficit was also affected by interventions in national airlines, and in some other Member States (Hungary, Slovenia) by interventions in the railway sector. In Portugal, dealing with the legacy debt of transport SOEs through a combination of equity injections and debt to equity conversions also entailed the reclassification of some companies within the general government, including the railway operator.

3. REFORMING STATE-OWNED ENTERPRISES

The performance of SOEs needs to be judged in the context of the sector and markets where they operate. This raises questions of adequate market functioning and regulatory oversight. Where SOEs operate in competitive markets, a level playing field with competing firms is necessary, also as regards access to finance. Where the SOE has a de facto monopoly, a strong regulatory monitoring and oversight is required. In addition, companies must ultimately be accountable to their owners and as such it is necessary to ensure that SOEs effectively meet the objectives set for them.

This chapter discusses reforms of SOEs, in particular their rationale, but also the difficulties associated to their implementation.

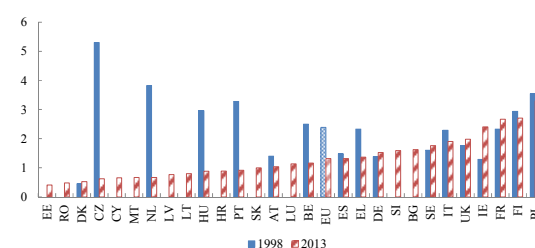
3.1. REFORMING STATE-OWNED ENTERPRISES

Significant reforms of SOEs have taken place in the EU Member States in the recent years. These reforms have generally aimed at improving their efficiency and their effectiveness in achieving their objectives (both commercial and non-commercial). Efficiency enhancing measures range from modifications of the legal framework and corporate governance of SOEs (including corporatisation and separation of activities) to selling assets to private parties or full privatisation, the latter particularly in a context of constrained public finance. Other reforms have aimed at improving transparency and accountability of SOEs not only for efficiency purposes but also to comply with ethical and deontological requirements.

Important reforms efforts have been undertaken in many Member States between 1998 and 2013 with regards to direct government control over business enterprises (Graph 1.4.1⁽¹⁷⁾). In particular direct control over business enterprises has decreased significantly in Czech Republic, Portugal, the Netherlands, Hungary, Belgium and Greece. The OECD index on Corporate Governance of SOEs on the other hand suggests that on the whole this has not led to significant changes in corporate governance

practices for SOEs apart from a few exceptions⁽¹⁸⁾.

Graph 1.3.1: Direct control over business enterprise index



Source: OECD. Lower values represent better performance

3.2. ECONOMIC RATIONALE OF THE PERFORMANCES OF STATE-OWNED ENTERPRISES

The main objectives of SOE reforms can be considered to be (i) effectiveness in achieving non-commercial goals; and (ii) economic efficiency and value for money). The latter has a close relation to fiscal considerations (fiscal revenues and the value of public assets). The overall policy context however matters for SOE reforms in view of their non-commercial policy goals (which could perhaps be achieved in a sufficiently effective and efficient manner through other instruments) and their close link to wider market and sector reforms.

SOE reforms require clarity on the rationale of the SOEs in question. Considering how to increase the effectiveness of SOEs presupposes clarity on these commercial and non-commercial goals. Similarly, attempts to increase the efficiency of SOEs need to take explicit account of the costs of the non-economic objectives. However, in the context of countries with a high public debt, privatisation may become a policy option as it can contribute to support public finances reforms. The proceeds may contribute to debt reduction whereas relinquishing public ownership may reduce public liabilities, both of which contribute to regain investors' confidence.

⁽¹⁷⁾ For interpretation of the index see footnote 5.

⁽¹⁸⁾ The index on corporate governance is not presented because it is at odds with some of the findings of the country-specific analysis

3.3. MODALITIES OF THE REFORMS OF STATE-OWNED ENTERPRISES ⁽¹⁹⁾

SOE reforms can be implemented either through changes in the legal framework and corporate governance of SOEs, with in extremis outright privatisation, accompanied by reforms of the market/sector and the overall regulatory framework in which the SOEs operate. It usually requires a combination of different measures but the package and the sequencing of measures strongly depend on country-, sector- and company-specific circumstances.

3.3.1. Legal framework

Member States' reforms of the legal framework in which SOEs operate seem to have been motivated mainly by the need to clarify the scope and role of the state ownership and to improve the efficiency of SOEs in a context of fiscal constraints. For example, Lithuania published in 2010 the first overview of state-owned commercial enterprises and introduced a reform to ensure the separation of ownership and regulatory functions.

Croatia published its first complete register of centrally-owned SOEs in 2013 and a register of managerial appointments in 2014. Slovenia adopted the asset management strategy and the classification of state-owned enterprises in July 2015, however, only for direct asset holdings. In addition, the centralised state management fund (SSH) was established in 2014, which is the single coordinating authority in charge of the management of the state assets.

Recently Italy's Stability law 2015 imposes new transparency obligations on regional and local authorities requiring them to prepare and implement a plan to reduce and rationalise the scope of their shareholdings by December 2015. In Portugal, the reform of SOEs ensured the separation of ownership and regulatory functions. The new SOEs framework law created a dedicated technical unit providing technical support in all SOE related topics to the Minister of Finance as well as monitoring the performance of SOEs.

More generally, following the principles developed by the OECD reforms of the legal framework in which SOEs operate aim to clarify the role of the state as an owner and guarantee the applicability of general laws to ensure competitive neutrality. In brief they should address the following issues:

- **Organisation of the state acting as an owner:** reforms often aim at centralising the state ownership function in order to establish a single decision making line, and thus to ensure better public finance management of the SOEs and a greater independence from the other state's functions (namely policy-oriented and regulatory ones). A pre-condition priority is often to clarify the scope of the state ownership.
- **Separation between ownership and other state functions:** reforms may also ensure a clearer distinction between the ownership, policy-making and regulatory roles of the state, especially as regards sectoral policies and regulation. This can be achieved, inter alia, by clarifying the role of the Ministry of Finance vis-à-vis the sector ministries.
- **Changing the governance and reporting modalities for SOEs:** reforms may also help to better specify who in the government is instructing and overseeing the SOEs and which control instruments can be used. It is important to avoid conflicts of interest; for this reasons, in Member States without a centralised ownership function, it is often considered useful to allocate the governance of SOEs which have a value chain relation to one another to different departments or ministries.
- **Applicability of general laws and regulations:** SOEs are, as a rule, subject to the same laws and regulations as other enterprises. Competition rules and state aid rules (subsidies) generally apply to state-owned enterprises. This is particularly relevant when Member States envisage taking measures in the form of financing (e.g. capital injections, writing off of debts), restructuring and/or privatisation of SOEs in order to address the problems they might encounter ⁽²⁰⁾. However,

⁽¹⁹⁾ This section refers to the work carried out by the OECD on corporate governance of SOEs: OECD (2011) and OECD (2015).

⁽²⁰⁾ European Commission (2012).

in cases where SOEs take specific legal forms (“closer” to the general public sector), some differences in bankruptcy rules may occur.

3.3.2. Corporate governance of state-owned enterprises

Several reforms of the corporate governance of SOEs took place in recent years in a number of Member States.

Such reforms were often introduced to comply with recommendations issued in the context of financial assistance programmes. For example the introduction of the corporate governance legislation for SOEs in Romania aimed at improving transparency and highlighted the costs to society of financially supporting mismanaged companies. Similarly, in Portugal, appointing the board of SOEs became under the scrutiny of an independent committee, ensuring increased transparency, impartiality, accuracy and independence in the recruitment selection of candidates.

In other Member States SOE reforms were introduced in the context of the European Semester. For instance, Croatia has recently adopted a new framework for the selection of supervisory boards, with a parallel reform of management board nominations expected to follow in the second half of 2015. The reform strengthens the qualification requirements for applicants⁽²¹⁾ and, at the same time, puts candidates from the private sector on a more equal footing with those from inside the SOEs. Croatia has also recently embarked on a pilot project to implement transparent target-setting for a selection of SOEs and is currently at the stage of securing technical assistance for the project. In Slovenia a new corporate governance code for SOEs was adopted in 2014, which ensures that SOEs and private companies operate on equal footing⁽²²⁾. In

addition Slovenia is currently discussing the introduction of top-down performance criteria that state-owned enterprises will have to meet.

Finally, some countries introduced reforms of the corporate governance of SOEs in a different context. For example, several institutional reforms relating to the governance of SOEs have been undertaken in Sweden since 2007. In the area of transparency and disclosure, the government adopted new guidelines regarding the external reporting by SOEs.

The OECD has elaborated a series of guidelines on reforms of the corporate governance of SOEs that aim to improve efficiency and accountability of the public companies. Inter alia, they should address the following issues:

- Transparency in setting commercial and non-commercial objectives: reforms may ensure that company-specific financial as well as societal obligations are clearly mandated, publicly disclosed and that the costs of the latter are transparent and covered by direct subsidies, subject to EU state aid rules. Greater transparency in company performance and setting adequate company-specific objectives bring a larger exposure to market discipline and objective performance benchmarks and thus strengthen the boards’ accountability. The main challenge in this respect is to put in place a credible compliance mechanism, while ensuring that the definition and evaluation of objectives⁽²³⁾ take the sustainability of business, economic cycle and non-commercial activities into account.

realises the principles of transparency and touches upon a number of longstanding issues such as the remuneration and bonuses of the company boards. The code does not exclude the parallel application of other corporate governance frameworks (e.g. that of listed companies), thus eliminating the cases of privileged or otherwise differentiated treatment of majority-SOEs/minority-SOEs in comparison with privately held companies.

⁽²¹⁾ Apart from being familiar with corporate governance, applicants will need to demonstrate five years of experience in executive positions or ten years of academic research experience.

⁽²²⁾ The code enhances the separation of the policy and regulatory functions of the state from its capacity as an owner; applies across the spectrum of state-owned enterprises under the ‘comply or explain’ principle (with limited exceptions); reinstates the roles of the company bodies, in particular the supervisory board, and the company’s position as regards the different stakeholders;

⁽²³⁾ The range of objectives may in particular include the expected rate-of-return and related dividend payment, targets on the optimal capital structure, the level of investment and performance criteria related to the non-commercial goals. Regarding the latter, the mandate to carry out non-commercial activities may clearly specify also the range of activities, instruments and actions delegated to the SOE.

- Empowering the management of SOEs and strengthening appointment procedures: reforms may help ensure that the SOEs' boards have both the necessary competences and authority to carry out their functions. In several Member States the approach to exercising ownership rights has gradually shifted towards steering on objectives, under which the government refrains from interference in day-to-day management of the SOEs and gives instead the boards the necessary operational autonomy to achieve well-defined targets. Furthermore, reforms can improve the performance of SOE boards by issuing clear guidelines for their remuneration and competence requirements, and by making use of independent professional recruiters and international advertisements ⁽²⁴⁾.
- Corporatisation changes the status and nature of SOEs and brings their organisation / modus operandi closer to that of private companies, notably in terms of management and financial reporting practices. While it is an essential preparatory step for the (full or partial) privatisation of a SOE, it can be carried out as a self-standing reform measure. The same applies for account and "functional" unbundling, i.e. the separation of functional activities into separate accounting and reporting batches and organisational units respectively; they can be a separate reform action or serve as steps to ownership unbundling which for SOEs implies partial or full privatisation.

3.3.3. Privatisation from an State-owned enterprises' reform perspective

The EU treaties are explicitly neutral on companies' ownership structure and the decision to set up new SOEs or to privatise existing ones is up to Member States. As privatisations have been pursued by many Member States over the recent years, it seems necessary to discuss them from an SOE reform perspective.

⁽²⁴⁾ Adding professional qualification to the selection criteria and in particular giving sufficient credit to executing experience from the private sector may boost the professionalism of boards. Such guidelines could also enhance the integrity of SOE directors, by including provisions regarding conflicts of interest.

A wave of broad privatisation took place in the United Kingdom in the 80s and 90s. This reduced considerably the scope of the ownership of the state in the economy and increased its regulatory functions.

A more recent wave of privatisation and/or its preparatory steps (such as corporatisation and unbundling of activities) has occurred, mainly in the network industries, accompanied by sector reforms and improvement strengthening of the sectoral regulatory framework. Public finance constraints have been a primary motivation in these efforts. This is for example the case of Portugal which launched a programme of privatisation as part of the recommendations of the financial assistance programme. Privatisation proceeds of about EUR 10 bn during 2011-2014 have overachieved the target set in the Memorandum of Understanding for Portugal. Roughly half of it was channelled for direct public debt reduction. In Slovenia, a list of fifteen companies was compiled in 2013 for a first cycle of early privatisations. The sales process has been on-going and six out of these companies have been privatised, amongst which Airport Ljubljana and NKBM (the second largest bank) were the most important transactions.

From a practical point of view, privatisation involves a change from public to private ownership for a part of or the whole SOE. The objective of privatisation is generally conceived as bringing the SOE's efficiency into line with that of well-run private companies (taking duly account of the SOE's non-commercial objectives). Privatisation may also contribute to improving economic efficiency, if the competition framework is sufficiently strong, owing to effective competitive pressure from private parties on the markets where the SOE has been active and from (potential) entrants on those markets. As regards partial privatisations, placing a part of company shares on the stock market may help foster compliance with disclosure requirements, securities' regulation and governance codes.

Adequate market reforms and a reinforced regulatory framework should be necessary steps to accompany the privatisation of SOEs (in particular in network industries) in order to monitor the private operator in a context of the absence of effective competition. It also requires a

clear social plan for the SOE employees whose job status is affected.

In countries characterised by a high level of public debt, privatisation may be considered as a way to contribute to public debt reduction. An ambitious but realistic privatisation plan might contribute to put the debt ratio on a declining trend much faster than solely via accumulation of primary surpluses. Although privatisation proceeds themselves cannot be part of fiscal consolidation efforts, they may contribute to fiscal sustainability, as the reduction in debt will lead to a reduction in interest expenditure. This should be compared with possible public revenue effects of selling public assets such as for example reduced dividends.

3.3.4. Reforms of the market structure and the overall regulatory framework

The United Kingdom privatization process was accompanied by the creation of several regulatory bodies, such as the Office of Rail and Road, the Office of Gas and Electricity Markets (Ofgem), the Office of Communications, the Water Services Regulation Authority, and the Financial Conduct Authority.

In Portugal concrete measures for a more market oriented railway sector were put forward, including new public service obligation agreements, the unbundling of freight railway terminals and subsequent privatisation (ongoing) of the loss making SOE that was competing as a freight operator in the market. The privatisation programme in Portugal was accompanied by a strengthening of the institutional capacity of the regulatory authorities in the network industries.

The reforms undertaken in Italy which introduced ownership unbundling between the gas transmission operator and the gas supplier offer a concrete example of profound changes to the market structure in which SOEs operate that however do not entail privatisation.

As experience in some Member States shows, reforms of the overall regulatory framework and market environment in which SOEs operate are crucial for the performance of SOEs (or privatised companies). This will depend more broadly on whether the market structure is competitive and on the rules and institutions affecting entry, exit,

bankruptcy, and the strengthening of competition among existing firms. However, in specific sectors such as network industries (with high sunk costs), market reform measures and an appropriate regulatory framework will be needed to ensure well-functioning markets.

Generally speaking, transforming a public monopoly to the private sphere does not guarantee a better performance in terms of higher efficiency. Reforming the market structure and the overall regulatory framework in which SOEs or privatised companies operate is therefore crucial as their performance will depend on whether they will face competitive pressures in the various markets they are active (on both input and output side) and on the rules and institutions affecting entry, exit, bankruptcy, and the strengthening of competition among existing firms.

Finally it is important to underline that adequate market reform measures and reinforcing the regulatory framework aimed at fostering effective competition should take place before privatising the SOE. In the case of network industries, such reforms can contribute to ensure that the incumbent monopolist's investment obligations are respected when the firm is privatised. Alternatively, failing to put in place the adequate regulatory framework prior to privatisation could reduce the prospective value of the company to (potential) investors, which will require a risk premium to compensate them for future changes.

3.4. INTRINSIC DIFFICULTIES OF THE REFORMS OF STATE-OWNED ENTERPRISES' REFORMS

The nature of SOEs has a profound impact both on how governments can use them as "policy instrument" to meet the policy objectives in place and on their attempts to reform SOEs.

First, governments may be reluctant to significantly reform or liquidate SOEs in view of their "sunk capital" and the considerable administrative efforts required. Hence, SOEs have a strong tendency to permanence and to a business as usual inclination, often to the point that their existence becomes an a priori for policy makers. This may present the risk of SOEs becoming de facto partners in policy making and

therefore less independent in their decisions or even used for political purposes.

Second, the organisational "distance" between the managers and the owners of SOEs may create a situation of both incomplete and asymmetric information leading to mission drift⁽²⁵⁾ and X-inefficiencies⁽²⁶⁾. Even though these governance issues are common to both public and private companies, usually the public owners are legally bound to specific modes and standards of governance. Moreover, SOEs often face less market pressure from competitors, which results in less and less reliable performance indicators.

Third, as mentioned SOEs tend to serve both commercial and non-commercial policy objectives. The latter are often tied up with sectoral policies. This implies that SOE reforms are usually bound up with changes and reforms on other policy areas.

In view of the required efforts, barriers and complexities to reform SOEs, there is a need for a systematic and comprehensive approach almost always requiring a balanced mix of various reform actions depending on the specificities of each situation.

⁽²⁵⁾ It occurs when a firm moves away from the organization's mission.

⁽²⁶⁾ The degree of inefficiency maintained by firms under conditions of imperfect competition.

4. CONCLUSIONS

In some Member States, SOEs have a particular macroeconomic relevance, either because they operate in strategic economic sectors or because their liabilities constitute potential risks for public finances. For this reason, the performance of SOEs need to be assessed in conjunction with their impacts on market functioning and on governments' budgets.

In the network sectors, the financial performance of SOEs shows marked differences between the energy and the rail sector, most notably in terms of profitability and the investment rate. In the energy sector, SOEs initially display a comparatively high performance, which sharply drops during the period following the crisis. SOEs in the rail sector exhibit an initially lower but more stable performance throughout the period.

In the new Member States the return on equity in private firms is in most cases substantially higher than in SOEs. In most of the analysed countries the average return on equity for SOEs turned negative during the crisis period (namely in Bulgaria, Croatia, Hungary, Poland, Romania and Slovenia). However, return on equity has reduced considerably also for private firms in the crisis years. There may be other factors at play behind the discrepancy in financial performance.

While governments' participation in corporations may be beneficial for Member States' budgets, it could also lead to direct budgetary costs. Contingent liabilities of SOEs are relatively high in a number of Member States due to the large balance sheets of some public financial institutions. Certain recently established reporting obligations have enhanced the transparency regarding the nexus of public corporations and states' budgets. However, data availability is still limited and not uniform across Member States.

The principal objective of SOE reform should be to improve accountability and efficiency. This requires an adequate accountability framework to monitor financial performance as well as effectiveness vis-à-vis non-financial targets. Modifications of the regulatory framework have important implications for SOEs as the exposure to increased competition provides incentives for better management and efficiency

gains. Past experience suggests that privatisation should in most cases be accompanied or, even better, preceded by market reform in order to avoid rent-seeking incentives. Furthermore, it is essential to recruit management with appropriate background, independence and commercial expertise, particularly when the company has purely commercial goals, and to ensure professional auditing.

Part II

Economic performance of state-owned enterprises: an empirical analysis in selected sectors and Member States

OVERVIEW

Assessing SOE performance is important to determine their effectiveness in meeting their objectives and to estimate their effects on markets and on public finances.

This part of the report will present the methodology and results of two econometric analyses of SOE performance. The first analysis, presented in the first chapter, focuses on SOEs in the energy ⁽²⁷⁾ and railway sectors. The second analysis, presented in chapter 2, covers all sectors but focuses on SOEs in the new Member States.

⁽²⁷⁾ In this section the "energy sector" covers the electricity and gas subsectors.

1. PERFORMANCE OF STATE-OWNED ENTERPRISES IN THE ENERGY AND RAILWAY SECTORS

This chapter provides a comparative analysis of the financial performances of SOEs and private companies in the energy and railway sectors.⁽²⁸⁾ Because of the nature, role and objectives of SOEs, performances will not be assessed solely through profitability indicators. The analysis will take a broader perspective, looking also at the cost-efficiency, staff costs, investments and indebtedness of firms in these sectors.

1.1. RECENT EVOLUTIONS IN ENERGY AND RAIL

1.1.1. Regulation and competition in the energy and rail sectors

Historically, most countries have organized the provision of energy and rail services through monopolistic and vertically integrated utilities. However, since the 1990s, deep reforms have been undertaken in order to open these sectors to cross-border provision, more competition and market dynamics.

In the energy sector, the EU has produced a series of comprehensive legislative packages⁽²⁹⁾. Their main elements are the strengthening of national regulators, the requirement for effective separation of the transmission networks' operation from supply and generation activities (unbundling), and certain requirements related to network cooperation, consumer rights, transparency, and access to transmission networks, gas storage and LNG (liquefied natural gas) facilities.

In railways a similar approach⁽³⁰⁾ has been adopted by the EU albeit with some differences. The process of market opening has started in the freight segment and more recently extended to the international passenger segment. The transposition of the existing railways packages translated into

increased competition in the freight and passenger segments and independent infrastructure managers. While a Fourth Railway package is currently under discussion⁽³¹⁾ the existing legislation exempts railways from competitive procedures for the awarding of contracts with public service obligations. In addition, regarding the relationship between infrastructure managers and railway undertakings, existing separation requirements are not as stringent as in the energy sector.

These regulatory reforms have reshaped the energy and rail sector, leading to the coexistence of regulated and competitive activities⁽³²⁾.

Regulated activities (infrastructure)

Regulated activities are those where the physical infrastructure constitutes a natural monopoly and therefore competition in the market cannot develop. This is the case of gas and electricity transmission and distribution services and railway infrastructure management. The EU legislation empowers national sectoral regulators to set the access tariffs for these infrastructures in such a way as to create a levelled playing field for the operators. However there is no uniform formulation of these access tariffs which therefore vary across Member States. In general they include full cost recovery for the infrastructure managers plus investment needs and profit margins. Commission analyses⁽³³⁾ show that while such tariffs may enable operators to get fair and transparent access to the infrastructures, they may also lead to over- or under-compensation of the infrastructure managers.

The issue of regulated tariffs is particularly relevant for a proper assessment of the financial performances of companies active in these subsectors. If the network charges are set too low, companies may struggle to recoup their costs and even make losses; on the other hand if they are set

⁽²⁸⁾ This chapter was authored by Martijn Brons and Mirco Tomasi.

⁽²⁹⁾ The last of them is the Third Energy Package, Directives 2009/72/EC and 2009/73/EC set the rules for the internal markets of electricity and gas, respectively

⁽³⁰⁾ Information on the Railway Packages can be found here: http://ec.europa.eu/transport/modes/rail/packages/index_en.htm

⁽³¹⁾ In January 2013, the Commission adopted its proposals for a Fourth Railway Package covering the issues of rail governance, market opening for domestic passenger rail transport, competitive tendering for Public Service Obligations contracts and a new role for the European Railway Agency.

⁽³²⁾ For a more detailed analysis of market functioning in network industries see European Commission (2014)

⁽³³⁾ European Commission (2014 a)

too high, windfall profits may occur. In any case, the regulated tariffs determine the rate of return of the companies and have therefore a direct impact on their financial results.

Non-regulated activities (production and services)

Non-regulated (or competitive) activities are those where – in principle – multiple operators may compete to provide the services. In these activities, the pricing mechanism is supposed to be left to demand and supply dynamics. Electricity generation and retail, gas wholesale and retail and rail freight and passengers activities are normally considered as potentially open to competition. However due to several factors, competition in these subsectors is not equally developed in all Member States and companies may be able to enjoy a considerable market power or be subject also in these sectors to strict regulation. ⁽³⁴⁾

While the energy and railway packages foresee a liberalization of these activities, Governments still have margin to intervene in particular by determining the scope of the Public Service Obligations.

In the field of energy, the EU legislation imposes a public service obligation to Member States with regard to electricity. Member States shall ensure that all households have the right to be supplied with electricity of a specific quality at a reasonable, transparent, easily comparable and non-discriminating price. In order to ensure the provision of universal services, a supplier of last resort can be appointed by the Member States/regulatory authority. Very often, the incumbent is entitled to play this role. In addition, Member States are required to define "vulnerable customers" - a concept linked to the definition of energy poverty- , for which any form of protection could be applied. The protection of vulnerable customers can take different forms such as the prohibition of disconnection at critical times (winter) or the application of regulated prices to this category only.

⁽³⁴⁾ Note that for the rail passenger sector in particular the distinction is not clear-cut; prices are in many cases regulated through way of PSOs, legal cartels or directly by the state. This sector could therefore be seen as considerably regulated.

In railways, the Public Service Obligation (PSO) compensation should cover the net financial effect which equals to the costs incurred in relation to a PSO minus positive financial effects generated within the network operated, minus receipts from tariffs and revenues generated by PSO activities plus a reasonable profit (meaning a rate of return on capital that is normal for the sector in a given Member States taking account of the level of risk that the public service operator incurs when executing its obligations under the public service contract). In many countries, the level of the compensation corresponds to the difference between the foreseen costs and revenues from ticket sales. The calculation of overall costs varies across countries. Although in principle Regulation 1370/2007 stipulates transparency and public tendering, Article 5(6) leaves it to competent authorities to decide whether to directly award rail contracts or to organise competitive tenders.

The scope of the PSOs and the modality of its application may have a significant influence on companies' financial performances. For example a country may use a wider definition of "vulnerable consumers" than another and therefore apply regulated prices to a larger portion of the electricity consumers. The way the PSO is applied also matters. In some countries, some companies are essentially dedicated to carrying out the public service obligation and the subsidies received by the state constitute a considerable part of their revenues. These factors have non-negligible impacts on the financial results of the companies involved as the PSO by definition covers segments of the market which are not profitable and where therefore the rates of return are determined by the regulated prices.

In conclusion, the degree of competition that can be found in these liberalized subsectors varies greatly from one Member State to another. The reasons can be a different transposition of the EU rules, country-specific obstacles that limit competition, for example very small or isolated markets or other barriers to new entrants. In this case, companies may be able to enjoy significant market power regardless of whether they are public or private. Under such circumstances one could therefore expect companies' mark-ups to be higher, the lower the competition they face. However state-owned companies may be compelled by their owner to

pursue objectives other than profit maximization. These companies may therefore not fully exploit their market power even in non-competitive or quasi-monopolistic markets and maintain their returns within politically set limits.

For the reasons outlined in this section, the analyses in this chapter distinguish between regulated segments - the infrastructure operators - and non-regulated segments - the product and service activities. A separate category contains those companies which operate in multiple subsectors – energy conglomerates⁽³⁵⁾ and railway conglomerates. While such a classification does not fully capture the variety of market structures and regulatory regimes present in the Member States, it enables to compare companies that at least in principle should face similar business environments.⁽³⁶⁾

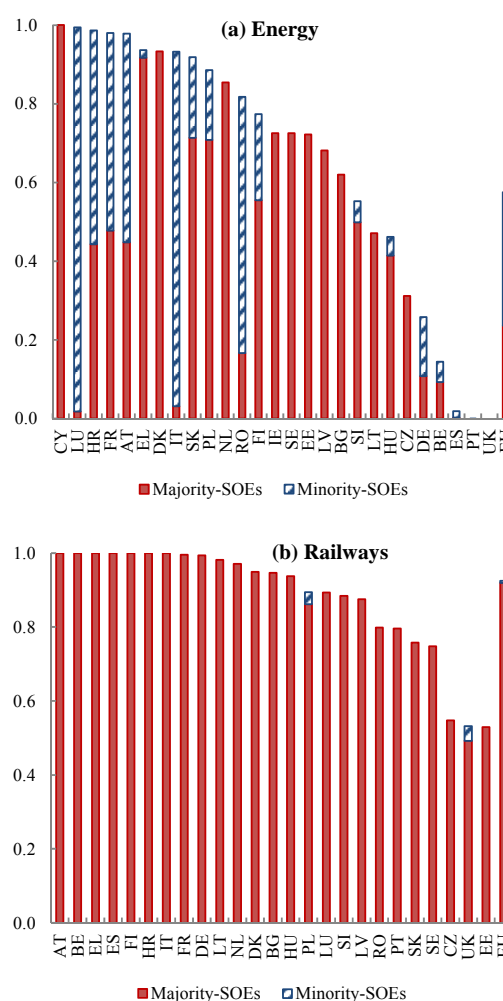
A further distinction is made between companies where the government owns 50% or more of the shares (referred to here as majority-SOEs); and companies where the government owns between 20% and 50% of the shares (referred to here as minority-SOEs).

1.1.2. Presence of state-owned enterprises in energy and rail

Over the period 2008 to 2013 the reported share of SOEs' turnover in total energy turnover was almost 60% in the EU (Graph II.1.1, panel a). Cyprus, Luxembourg, Croatia, France and Austria are the Member States with the highest shares of SOEs turnover in total energy turnover: essentially 100%. Conversely the United Kingdom, Portugal and Spain display some of the lowest shares of SOEs in total energy turnover. The most

widespread type of SOE in the EU's energy sector is the minority-SOE with a share of 34%, the majority-SOEs represent about 24% of the EU's energy turnover.⁽³⁷⁾

Graph II.1.1: Breakdown by ownership structure of total turnover, 2008-2013



Source: Commission services based on ORBIS data

In the railway sector SOEs represented around 93% of the turnover in the EU over the period 2008-2013 (Graph II.1.1, panel b). In several countries in the EU, SOEs represent essentially the vast majority or even entire turnover of the sector⁽³⁸⁾, exceptions being Estonia, the Czech

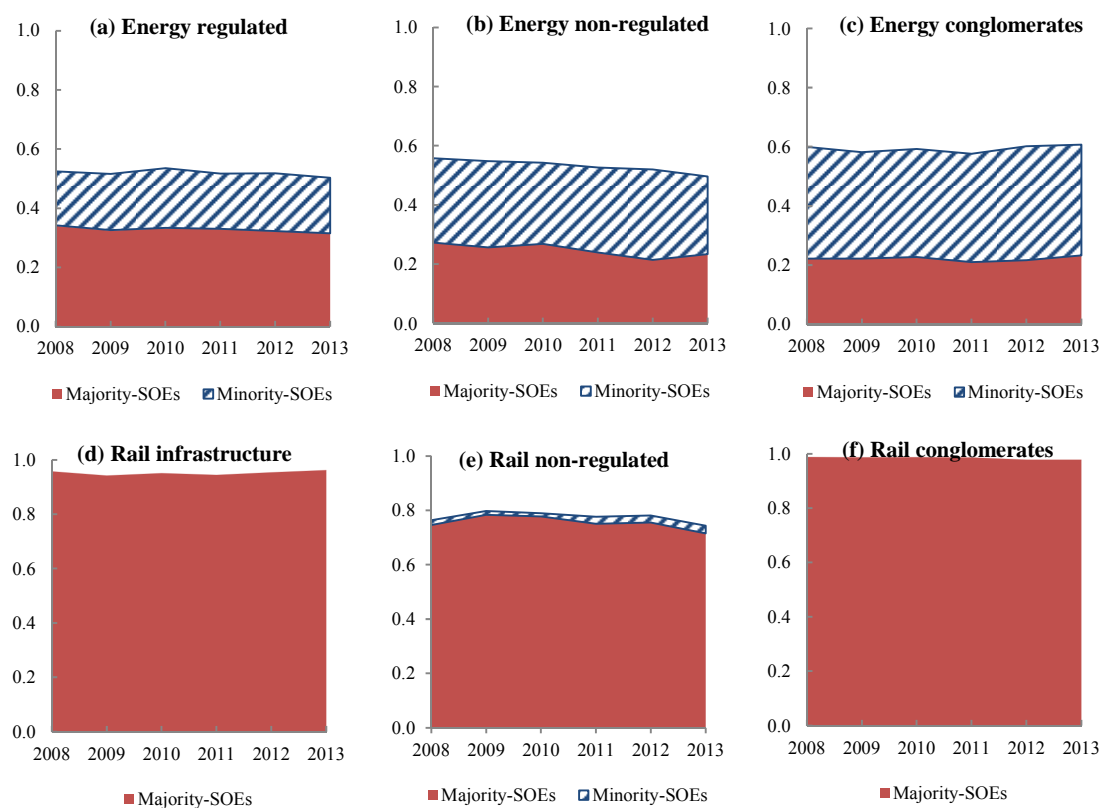
⁽³⁵⁾ The energy conglomerates category includes more than 250 companies which operate across subsectors, mainly distribution and retail activities. The railway conglomerates category includes about 25 companies which are active in both freight, passenger and infrastructure operation. In general they are organised as a holding in order to ensure the separation of activities.

⁽³⁶⁾ Information on the sample size for each of the categories is provided in Annex II.A1. The results of the estimations are based on within-country differences between SOEs and private firms, and therefore ultimately based on observations from countries where both SOEs and private firms are active. In various subsectors the number of such countries is limited by the sample size; hence the interpretation of the results as being representative for the EU at large deserves caution.

⁽³⁷⁾ Note that the overall composition in terms of ownership for the energy sector at large masks substantial differences across energy subsectors.

⁽³⁸⁾ The database combines figures available in the ORBIS and AMADEUS databases.

Graph II.1.2: SOEs and MOEs in regulated and non-regulated sectors, share of total turnover



Source: Commission services based on ORBIS database

Republic and the United Kingdom, where the share lies around 50%. Compared to the energy sectors, the variation in types of SOEs involved is greatly reduced: majority-SOEs are overwhelmingly dominant while minority-SOEs only have marginal shares in the United Kingdom and Poland. ⁽³⁹⁾

When distinguishing between regulated and non-regulated subsectors, majority-SOEs appear to be the dominant feature in the regulated energy subsectors where they have slightly less than 40% of turnover (Graph II.1.2). Minority-SOEs instead have a significant share of turnover in the energy conglomerates where they represent almost 40% of total turnover. In the energy non-regulated sectors majority-SOEs and minority-SOEs have similar shares of turnover, both slightly less than 30%. In railways majority-SOEs are dominant in all

subsectors where they often represent more than 90% of total turnover.

1.2. LITERATURE REVIEW: THEORETICAL AND EMPIRICAL FINDINGS ON THE PERFORMANCES OF STATE-OWNED ENTERPRISES

There exists a vast literature of empirical estimations of SOE performance in different sectors and countries. When evaluating SOE performance, the analysis can be conducted through a comparison between SOEs and private companies, between SOEs in different countries and between pre- and post-privatisation periods. In addition, a choice of performance indicators must be made.

Most of the literature has focussed on profitability and efficiency performance and in a large amount of studies SOEs have been proven to

⁽³⁹⁾ Note that the overall composition in terms of ownership for the rail sector at large masks substantial differences across the subsectors

be less profitable and efficient than private companies. There are, however examples of the contrary, especially when specific sectors are analysed⁽⁴⁰⁾. One factor, stressed by many authors, that appears to play a substantive role in determining companies' performance is the market structure⁽⁴¹⁾. In markets with imperfect competition, where individual companies are price makers rather than price takers, the link between ownership and performance tends to be weaker.

Another way of assessing SOE performance is to compare their results pre- and post-privatisation. Authors taking this approach find disparate results in their analyses⁽⁴²⁾. According to some studies, companies' performance seems to improve in the period just before the privatisation. The political impetus behind privatisation as well as the will to drive up the sale prices impels government firms to operate more profitably by implementing efficiency restructurings. Performance post-privatisation tends to improve compared to the pre-privatisation period, although this is not always the case⁽⁴³⁾. In addition, some analyses show that privatized companies tend to shed labour and increase managers' pay, leading to changes in the functional distribution of income⁽⁴⁴⁾. Finally, analyses that try to capture societal impacts found that the positive aggregate welfare impacts of privatisation tend to be very low and subject to several conjectures. In particular, once aversion to inequality is included the aggregate welfare impacts may turn negative⁽⁴⁵⁾.

An interesting analytical standpoint consists in distinguishing between entities where the State has a majority share and those where it has a minority share. The assumption is that entities where the state has a minority share may achieve the best possible balance between social output and private returns and hence maximize aggregate welfare. Empirical analysis on companies delivering public services seems to suggest that indeed minority-SOEs achieve the best results in terms of cost-efficiency and that in the transition from majority to minority state ownership

companies improve their performance. However, a word of caution in interpreting the results is needed as in non-competitive markets – such as those where public services are often delivered – higher cost-efficiency could also be a consequence of unconstrained pricing power and hence may affect consumer welfare adversely⁽⁴⁶⁾.

Finally some authors challenged the notion that SOEs should be assessed solely on the basis of their profitability and efficiency performance⁽⁴⁷⁾. First of all, SOEs may have "politically" set costs, prices and revenues and therefore their performance is to a lesser extent related to efficiency and financial results. Secondly, SOEs may have been acquired by the state to save bankrupt private companies and protect employment. Their performance may therefore have been suboptimal to begin with. In terms of productive efficiency, various studies offer mixed and often conflicting results, leading some authors to conclude that, once again, the context and regulatory environment seem to matter more than the ownership in determining companies' performance.

1.3. EMPIRICAL ANALYSIS OF FIRM OWNERSHIP AND FINANCIAL PERFORMANCE

The importance of analysing SOEs performances stems from the fact that due to public ownership there is a direct link between the companies and the government budget. Loss-making or overly indebted firms constitute liabilities for the state, which may be required to intervene with capital injections or other forms of assistance.

Furthermore, since SOEs operate often in competitive markets, their commercial practices have a direct impact on competing firms and in general on the market functioning. Competition may be distorted, should SOEs be able to enjoy a soft budget constraint or any other form of advantage over the rest of the market participants. At the same time if inefficient practices of SOEs are not sanctioned, they may

⁽⁴⁰⁾ See for example Boardman, A. and A. Vining (1989)

⁽⁴¹⁾ See for example Domberger, S. and J. Piggott (1994)

⁽⁴²⁾ For a review of studies see Kim J. and H. Chung (2008)

⁽⁴³⁾ See Dewenter, K. and P. Malatesta (2001)

⁽⁴⁴⁾ See Haskel, J. and S. Szymanski (1994)

⁽⁴⁵⁾ See Florio, M. (2004)

⁽⁴⁶⁾ See Vining, A. and A. Boardman, M. Moore (2014)

⁽⁴⁷⁾ See Aharoni, Y. (2000)

result in rent extractions and higher prices for consumers ⁽⁴⁸⁾.

Monitoring SOEs performances will help to shed light on the firms' practices and on the extent to which their behaviour conforms to public expectations regarding service quality and cost-efficiency. The assessment of SOEs results represents therefore an effort to improve accountability and transparency.

In order to provide an overview of companies' financial performances the following key performance indicators have been calculated ⁽⁴⁹⁾:

- The **Return on Capital Employed** measures the profitability of companies and the efficiency with which they use their capital. The higher the value of this indicator, the greater the profit companies generate for every euro of capital invested.
- The **Operating Expenses ratio** is calculated as operating expenditures over turnover and it can be seen as proxy of the companies' management efficiency. ⁽⁵⁰⁾ Operating expenditures are often sector-specific; a comparison of performances should therefore be done only within sub-sectors. However in the energy sector, operating costs may also be country-specific as they include fuel costs which vary according to the energy mix.
- The **Staff costs ratio (staff costs as a share of operating expenses)** provides an indication of the labour-intensity of each company. Similarly to the Operating Expenses ratio, staff costs depends largely on the specific characteristics

of each subsector, companies should therefore be compared solely with their competitors in the same industry.

- The **Equity-to-Assets ratio** measures the fraction of assets financed by equity. Similarly to the asset-to-equity ratio, this ratio can be used to assess the financial health of a company through its level of indebtedness. The lower the equity to asset ratio, the more the company is leveraged.
- Finally, the **Investment Rate** is calculated as the investment made in fixed asset per EUR 1 of existing assets. In formula this is: $\text{Fixed Assets (t) + Depreciation (t) - Fixed Assets (t-1)} / \text{Fixed Assets (t-1)}$.

1.3.1. Data

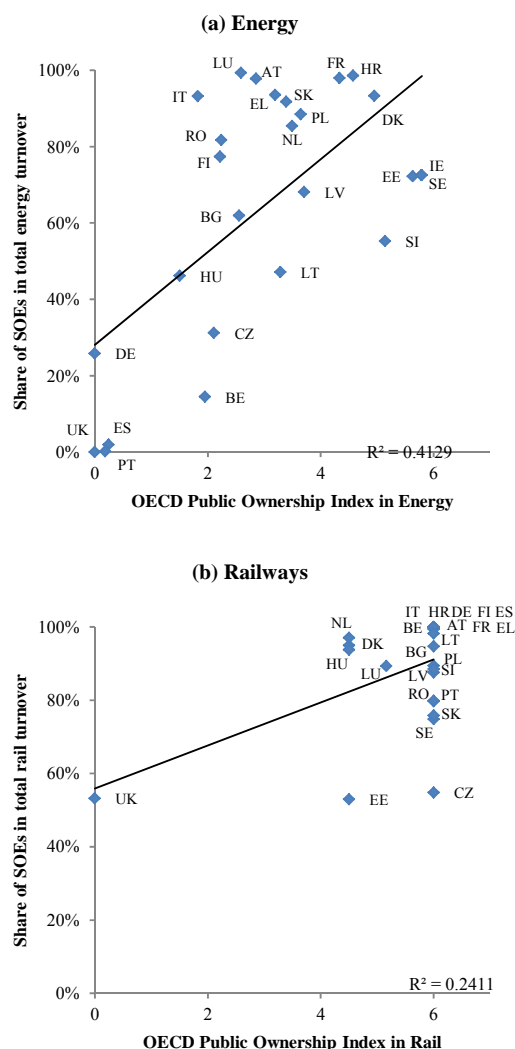
Financial data used for this estimation are drawn from the ORBIS database. The dataset contains about 950 companies from the EU28. The following sectors (and related subsectors) are covered: electricity, gas and railways. In the presentation that follows subsectors are grouped in **regulated sectors** and **non-regulated sectors**; companies operating in multiple subsectors are included in the category **conglomerates**. For an overview of the subsectors and their acronyms used in the note please refer to Annex AII.1.

⁽⁴⁸⁾ However, in imperfectly competitive markets, private companies may also be involved in rent seeking and market abuses. A strong regulatory environment and competition oversight is therefore necessary regardless of the ownership structure of the companies.

⁽⁴⁹⁾ The financial data based on which the financial performance indicators are calculated cover all activities of the companies and may as such include related services which are not directly part of the core business of the company.

⁽⁵⁰⁾ Note that for directly awarded PSOs a substantial share of turnover stems from state subsidies, although there are marked differences between Member States in this respect. In the case of such PSOs cases turnover may therefore not fully correspond to output and therefore overestimate cost efficiency. If directly awarded PSOs befall more often on SOEs than on private companies this may thus create a bias in favour of SOEs.

Graph II.1.3: Public ownership in the network sectors, 2013



Note: The OECD index for energy has been weighted to account for the relative size of the electricity and gas sectors within each country

Source: Commission services based on ORBIS database and OECD

The coverage of the database, while not exhaustive, is expected to reflect well the relative importance of private and public companies in the energy and railway sectors for the different Member States. In order to cross-check such coverage the share of SOEs in total turnover of the database has been correlated to the OECD Public Ownership index in both the energy and railway sectors (see Graph II.1.3). For the energy sector the correlation appears rather robust; for the railway sector the correlation is less evident,

mostly due to the fact that the OECD index is less continuous.

1.3.2. Some stylized facts

Regulated sectors

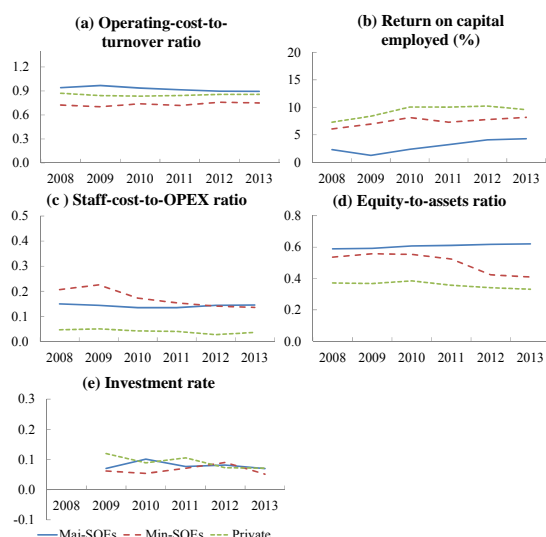
SOEs operating in the regulated energy subsectors⁽⁵¹⁾ display profitability ratios which are positive, yet consistently below those of the private and minority-SOEs (Graph II.1.4). The latter two categories have had very similar profitability ratios throughout the period considered. It is however worth noting that the gaps between the three categories of companies tend to close towards the end of the period.

Efficiency ratios (the operating costs as a share of turnover) of majority-SOEs have been slightly higher over the five years period than those of minority-SOEs and private companies, indicating relatively worse performances in terms of cost-efficiency. Also in this case performance tends to converge throughout the years. Staff costs of majority- and minority-SOEs have been consistently higher than those of private companies.

The average indebtedness of SOEs, measured through the equity to assets ratio, is lower than that of the minority-SOEs and the private companies, for the entire period. Private companies appear to be on average the most indebted category. Finally investment rates are very similar regardless of the ownership structure.

⁽⁵¹⁾ Electricity and gas transmission and distribution

Graph II.1.4: Financial performance of firms in the energy infrastructure subsectors

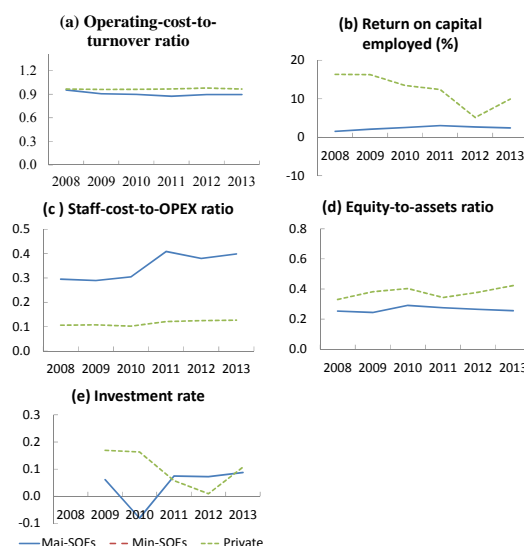


Source: Commission services based on ORBIS database

In the railway infrastructure sector⁽⁵²⁾, the average profitability ratio of private companies is higher than that of the SOEs although on a declining trend at least until 2012 (Graph II.1.5). In this sector however the ratio of operating costs over turnover of public companies is slightly lower than that of private companies, indicating relatively higher efficiency. Staff costs are markedly higher in SOEs than in private companies with a slight tendency to increase over the years.

The indebtedness of the SOEs is on average higher than that of the private companies and it remains broadly constant throughout the period. Private companies' indebtedness slightly decreases towards the end. Investment rates fluctuate widely over the period for both categories of company and end at broadly similar levels in 2013.

Graph II.1.5: Financial performance of rail infrastructure operators



Source: Commission services based on ORBIS database

Non-regulated sectors

In the energy non-regulated sectors⁽⁵³⁾, minority-SOEs have had higher average profit ratios than either the private companies or the majority-SOEs until 2012 (Graph II.1.6). In 2013 their profitability is in line with that of private companies after a marked decline over the years. When looking at the efficiency ratios minority-SOEs tend to have slightly better performance, followed by the private companies and the SOEs⁽⁵⁴⁾. However the efficiency performance of minority-SOEs, similarly to their profitability, appears to have deteriorated during the period. Staff costs are extremely low for all types of company and differences appear very marginal across the three ownership structures.

Similarly to the regulated sectors, majority-SOEs in energy non-regulated sectors appear to be on average less indebted than minority-SOEs and their private competitors. The level of indebtedness of the latter two categories is extremely similar over the entire five years period.

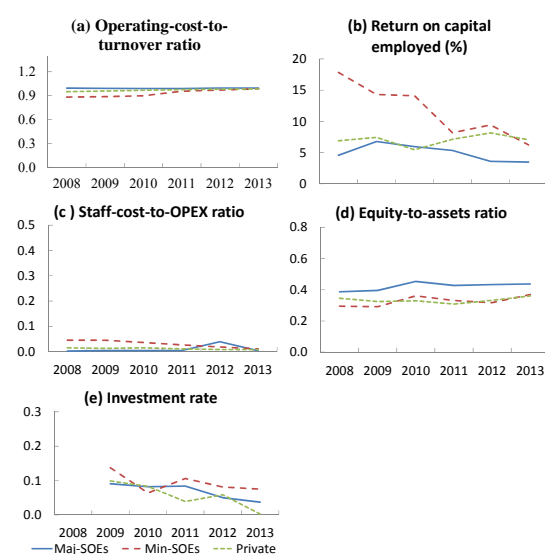
⁽⁵²⁾ In all Member States state-owned companies operate as railway infrastructure managers with the exclusion of Latvia where there are only data for one private company. In Bulgaria, Czech Republic, Hungary, Estonia, Lithuania, Poland, Romania and Slovakia there are both SOEs and private companies.

⁽⁵³⁾ Electricity generation, wholesale and retail; gas wholesale and retail.

⁽⁵⁴⁾ In the gas non-regulated sectors, MOEs have actually registered on average negative profitability in the last two years of the sample combined with a ratio of operating expensed on turnover above 100%.

Investment rates of minority-SOEs are slightly higher than for the other two categories of companies but the difference is very small. A visible downward trend is common among all companies.

Graph II.1.6: Financial performance of firms in the non-regulated energy subsectors



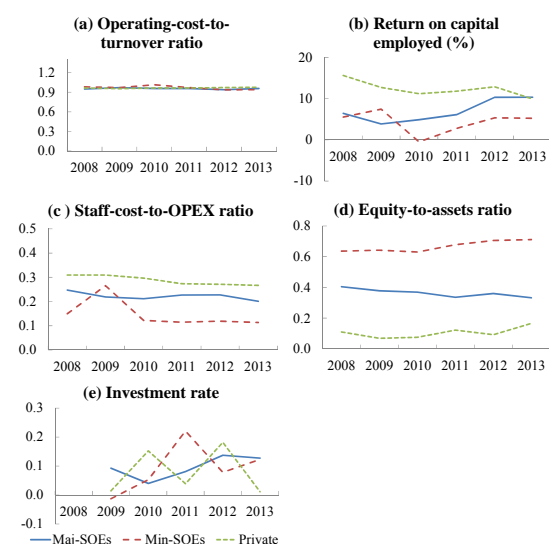
Source: Commission services based on ORBIS database

In the railway passengers and freight sectors, the average profitability ratios have been subject to wide fluctuations over the five years considered (Graph II.1.7). Majority-SOEs appear to increase their profitability while private companies decline, both reaching comparable levels in 2013. Minority-SOEs experienced some minor losses in 2010 at the peak of the crisis but regained afterwards moderate but positive profitability. In terms of efficiency, there is very little difference in performance across the ownership structures and over the years. Contrary to other sectors, staff costs appear to be higher for private firms than for SOEs, either minority-owned or majority-owned.

Minority-SOEs and majority-SOEs are substantially less indebted than private companies in these sectors. In the case of majority-SOEs indebtedness somewhat increases over the years, narrowing the gap with the private sector. Investment rates vary considerably over the years for the three categories; there appears to be no unique pattern in this case to justify conclusions

about the superior performance of one ownership structure over the others.

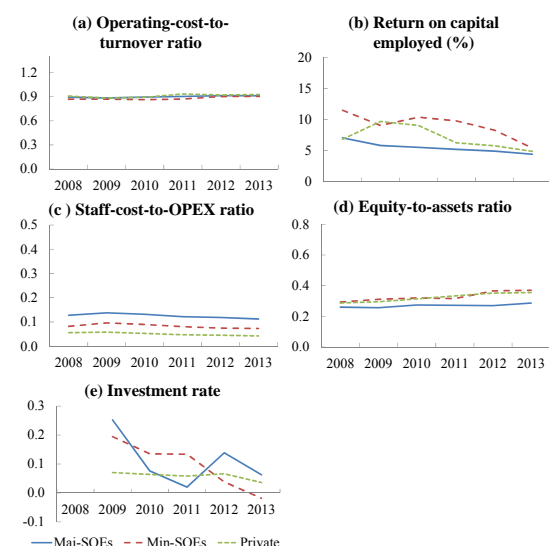
Graph II.1.7: Financial performance of freight and passenger railway undertakings



Source: Commission services based on ORBIS database

Energy and railway conglomerates

Graph II.1.8: Financial performance of the energy conglomerates



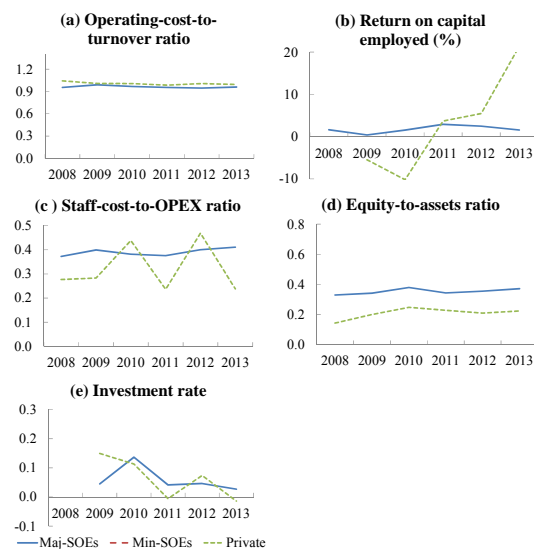
Source: Commission services based on ORBIS database

Minority-SOEs display the highest profit ratios among energy conglomerates although on a downward trend (Graph II.1.8). Profitability of

private companies and majority-SOEs is essentially the same from 2011 onwards. In terms of efficiency ratios; there is no discernible difference across the three ownership structures while staff costs are slightly higher in majority-SOEs than in the other two types of companies with rather stable trends over the years.

Among energy conglomerates the equity to asset ratios is rather similar across ownership structure, majority-SOEs appear to be however slightly more indebted than both minority-SOEs and private companies. However over the years the gap among the three appears to have narrowed. Investment rates are fluctuating quite substantially, especially in the case of majority-SOEs which however outperform the other types of companies in 2012 and 2013. Minority-SOEs investment rate shows a dramatic downward trend over the period and they end up with the lowest rates in 2013.

Graph II.1.9: Financial performance of rail conglomerates



Source: Commission services based on ORBIS database

In the railway sector, SOEs have had higher profit ratios than private firms until 2011 when private firms were actually making losses Graph II.1.9). After 2011 private firms profitability increase substantially and exceeds that of the SOEs which instead remain stable. The efficiency ratios do not differ between SOEs and private companies. Staff costs are generally higher in

SOEs except for two years where private firms reported higher staff costs ratios.

SOEs have a lower level of indebtedness than private companies throughout the five years period. The gap between the two tends to remain constant over the period. Investment rates are very similar between the two types of companies and in both cases they show a marked downward trend.

1.3.3. Econometric analysis of the relation between firm ownership and financial performance

An econometric analysis is carried out in order to investigate the relation between the financial performance of enterprises to the ownership structure, while controlling for the size of the enterprise, the subsector and Member State in which it is active, as well as the year of observation. Controlling for these aspects makes it possible to compare entities with different ownership structures in a comparable environment in terms of inter alia market conditions and regulatory environment.

Methodology

The analysis is based on observations for 946 enterprises, covering 28 EU Member States for the period 2008-2013. The specifications are estimated as a pooled cross-section model. The financial performance is measured by five different indicators, i.e., Operating-expenses-to-turnover ratio, the share of staff costs in operating expenses, Return-on-Capital-Employed, Equity-to-assets ratio, and the investment rate.

Estimations are carried out for each of the five different dependent variables, using the following general model specification:

$$Y_{it} = \beta_0 + \beta_1 \text{SOE_MAJOR}_{it} + \beta_2 \text{SOE_MINOR}_{it} + \beta_3 \text{SIZE}_{it} + \alpha_c + \alpha_t + \varepsilon_{it}$$

where Y_{it} is the performance indicator of enterprise i at time t ; SOE_MAJOR_{it} and SOE_MINOR_{it} are dummy variables for companies where the state holds more than 50% of the shares and companies where the state owns between 20 and 50% of the shares, respectively. SIZE_{it} represents the size of the enterprise measured in terms of turnover; α_c

and α_t represent country and time fixed effects, respectively; ε_{it} denotes the disturbance term.

Since entities in different subsectors are subject to different market conditions and regulatory environments, the financial performance of entities can be expected to differ between subsectors. However, the impact of the ownership structure on the financial performance may also be different for different subsectors. In order to account for such subsector-specific impacts the specification is estimated separately for each of the fourteen subsectors of the energy and rail sectors.⁽⁵⁵⁾ The results show that impacts indeed vary across subsectors, although a number of overall patterns can be identified.⁽⁵⁶⁾

Estimation results

Specification (1) has been estimated for each of the fourteen subsectors and each of the five KPIs. Since this study aims to assess the relationship between firm ownership and performance the main coefficients of interest are β_1 and β_2 , which respectively indicate the relative performance of majority- and minority-SOEs vis-à-vis private entities. Graphs II.1.10 to II.1.14 display the estimates of β_1 and β_2 for each of the fourteen subsectors and for each of the five KPIs. The estimation output and information about sample sizes by ownership are provided in Annex AII.1.

Firms in the regulated energy subsectors

⁽⁵⁵⁾ Alternatively, subsector-based differences in the impact of ownership on performance-based indicators could be accounted for through the inclusion of interactive terms between sub-sector dummies and ownership dummies in estimations. Separate estimation per subsector provides the advantage of more flexibility since it allows for differences in the country-fixed effects between subsectors.

⁽⁵⁶⁾ The estimation approach used in his study thus deals with sector regulation and market environment in two ways. First, the specification uses country dummies in order to control for unobserved Member State-specific factors that help determining firm performance, including those related to sector regulation and market environment. Second, the model is estimated separately for each of the fourteen subsectors in order to control for sub-sector specific factors that help determining absolute firm performance as well as ownership-related relative firm performance. In addition to specification (1) an alternative specification was specified in which market conditions and regulatory environment are modelled in a more explicit manner, by means of including variables based on sector-level indices on entry regulation, degree of vertical integration and market structure in the specification. Please refer to Annex IV for a description of this alternative approach and the estimation results.

Among these subsectors the cost-efficiency of majority-SOEs is lower than that of the private firms for the electricity transmission subsector. For the gas distribution sector the opposite is true, while for the other two subsectors no significant differences are found. These findings on cost-efficiency are reflected in the results for profitability where SOEs in the electricity transmission are found to do worse and those in the gas distribution sector are found to do better than their private counterparts. SOEs in the gas transmission sector also show a higher profitability than private companies. The share of staff costs tends to be higher for SOEs than for private firms for all regulated subsectors.

The indebtedness of SOEs, captured by the equity to asset ratios, is lower than that of the private companies in all of the regulated energy subsectors. The investment rate is found to be higher for the electricity transmission and gas distribution subsectors, while for the other two subsectors no significant differences emerged.

Railway infrastructure operators

Majority-SOEs operating as infrastructure managers are not found to have significantly different profitability and cost-efficiency performance than private companies, although the share of staff costs is higher, though. Their level of indebtedness, measured through the equity to asset ratio, is lower than that of the private companies. No significant difference in terms of investment rates is found.

Firms in the non-regulated energy subsectors

There is heterogeneity of results among the non-regulated energy sectors. Profitability of majority-SOEs is found to be lower in electricity generation and gas wholesale while no statistically significant differences are found for the other three subsectors. With respect to cost-efficiency, majority-SOEs appear to be less efficient than private companies only in electricity generation; In the gas wholesale and retail sectors the cost-efficiency is found to be lower for majority-SOEs. The staff cost ratio is higher for SOEs in the electricity generation and the two gas subsectors, while in the other two subsectors there is either no difference or SOEs actually outperform private companies.

With the sole exception of electricity retail, majority-SOEs tend to be less indebted than private companies while in terms of investment rate there appears to be no significant difference between private and public companies with the exception of electricity generation where SOEs invest more than private companies.

Freight and passenger railway undertakings

The profitability and cost-efficiency of majority-SOEs in these sectors is lower than that of the private firms; in terms of staff costs no clear conclusion can be made since in the passenger sector SOEs perform better than private companies, while in the freight sector they perform worse.

There appears to be no difference between private and public companies in terms of indebtedness while as far as investment rates are concerned, SOEs perform better in rail freight and no difference is visible in the passenger sector.

Energy and railway conglomerates

Among entities active in multiple energy subsectors (i.e. the so-called energy conglomerates) majority SOEs are not found to perform better than privately-held ones in terms of cost-efficiency ratio, although they appear to have higher staff costs and lower profitability. Similarly to most of other subsectors, the equity-to-assets ratio is higher for majority-SOEs in this category. The investment rate is also found to be significantly higher than for their privately-owned peers.

Among railway conglomerates, Majority-SOEs are found to have better performances than private companies in terms of cost-efficiency. No statistically significant differences emerge for any of the other indicators.

Minority-SOEs

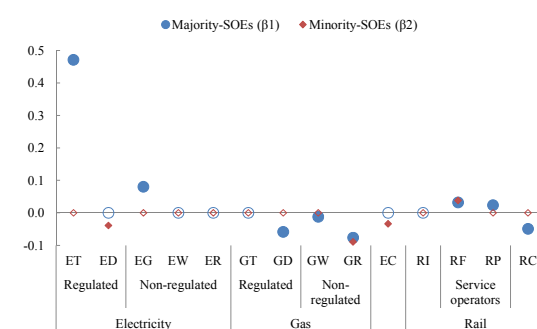
Overall, compared to the majority-SOEs, the performances of minority-SOEs display less significant differences with that of private companies. Concerning the operating expenses ratio and the profitability, the results show only isolated instances of significant differences in performance, and do not indicate any specific

overall pattern. Among the energy conglomerates the operating costs are found to be lower for minority-SOEs, compared to their private peers. However, profitability is also found to be lower for these companies, although the difference with private companies is rather small.

Larger differences in profitability are found among the freight and passenger railway undertakings, where minority-SOEs perform significantly worse than privately-held firms. The share of staff costs is higher for minority-SOEs for a number of subsectors, mainly concentrated in the non-regulated energy sector and the energy conglomerates. Regarding railway undertakings the opposite is true; private entities tend to spend more on staff than the minority-SOEs.

Similar as for the majority-SOEs, the equity-assets ratio tends to be higher for minority-SOEs than for private entities, particularly in the non-regulated subsectors and the energy conglomerates. Finally, as regards the investment ratio no significant differences were found between minority-SOEs and private companies, with the sole exception of the electricity generation subsector.

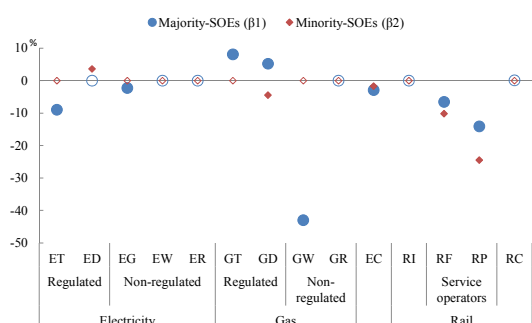
Graph II.1.10: Operating costs-to-turnover ratio (relative value of SOEs versus privately held entities)



Note: Statistically non-significant differences are reported as zero and displayed by transparent markers

Source: Commission services based on ORBIS database

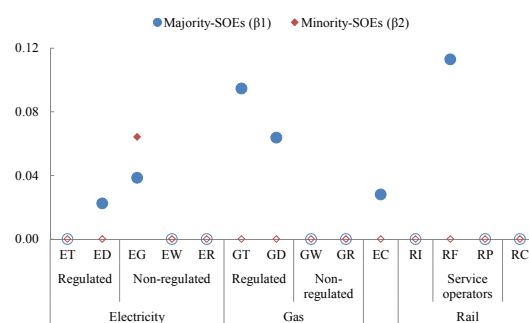
Graph II.1.11: Return on capital employed (relative value of SOEs versus privately held entities)



Note: Statistically non-significant differences are reported as zero and displayed by transparent markers

Source: Commission services based on ORBIS database

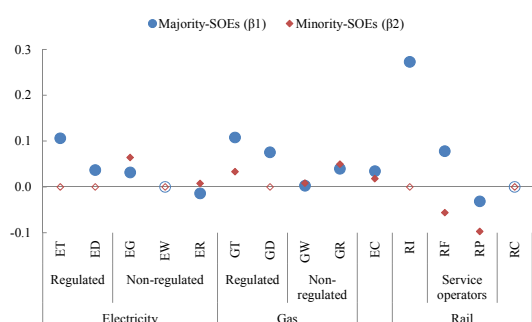
Graph II.1.14: Investment ratio (relative value of SOEs versus privately held entities)



Note: Statistically non-significant differences are reported as zero and displayed by transparent markers

Source: Commission services based on ORBIS database

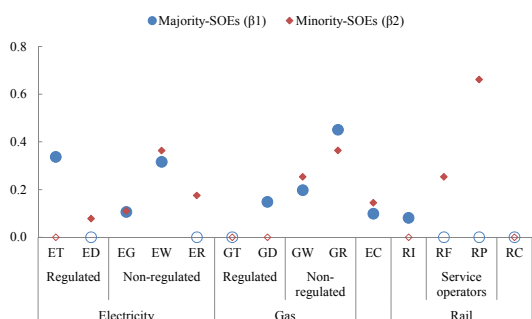
Graph II.1.12: Share of staff costs in OPEX (relative value of SOEs versus privately held entities)



Note: Statistically non-significant differences are reported as zero and displayed by transparent markers

Source: Commission services based on ORBIS database

Graph II.1.13: Equity-to-assets ratio (relative value of SOEs versus privately held entities)



Note: Statistically non-significant differences are reported as zero and displayed by transparent markers

Source: Commission services based on ORBIS database

1.4. CONCLUSIONS

As discussed in the literature overview, governments have established SOEs for a variety of reasons. In the energy and railway sectors, state intervention has been historically justified by the need to correct market failures as well as to provide at affordable and controlled prices and quantities certain services considered as essential for the population or the businesses. Given the variety of objectives that SOEs are supposed to pursue in the energy and railway sectors, it is reductive to assess their performances solely based on their financial results. A comprehensive analysis would include the estimation of externalities of SOEs on other sectors of the economy. However, in recent years policy developments in the EU have put pressure on SOEs in energy and transport to streamline their activities in an increasingly competitive market environment. At the same time, since the financial crisis public finances have entered a period of stress, and a renewed emphasis on the quality of public spending has required a greater focus on efficiency at every level.

This paper aims at assessing the financial performances of SOEs vis-à-vis private companies. The paper does not question the choice of maintaining under public control the companies but rather tries to shed some light on the links between the ownership structure of the companies and their financial results.

The analysis provides a mixed picture and as such is in line with some of the results offered by the literature. For the network sectors there appears to be less consensus than in other sectors on better financial performance of private companies versus SOEs. The estimation results of this paper show that in less than half of the subsectors in the energy and railway markets majority-SOEs perform worse than private companies in terms of profitability and efficiency. In the other subsectors SOEs' performance are comparable to those of the private firms with a few exceptions, minority-SOEs companies display results essentially equal to those of the private sector. This suggests that as the government stake decreases, factors that lead to lower profitability and efficiency of SOEs play a less important role. This outcome is also reflected in some of the literature where minority-SOEs are found to generally be more profitable than majority-SOEs because they adopt a more market-driven approach due to stronger competitive pressure.

SOEs tend to have higher staff costs than private firms. The literature finds that more often than not, SOEs tend to have generous wage bills, either because workers are able to extract relatively high salaries or because the overall level of employment is kept high. The results of the estimations seem to confirm the literature on this. Majority-SOEs consistently display higher staff costs than private companies with only a few exceptions. This is also the case for minority-SOEs where there is, however, less difference with private companies. A possible explanation that finds some support also in the literature is that SOEs tend to have a more progressive income distribution with a stronger role of trade unions in wage bargaining and a more or less explicit mandate to hoard labour in times of downturns.

SOEs' investment rates are either equal or higher than those of private companies. The investment rate of majority-SOEs is higher than that of private companies in about half of the subsectors while no difference is visible for the other subsectors.

Among SOEs, equity-to-assets ratios tend to be either higher or not different from those of private companies. This could be explained by the fact that private firms are relative newcomers and as such still face high investment costs. From a

public finances point of view, this result mitigates to some extent the need for the concern that so-called soft budget constraint may lead to state-owned companies piling up excessive losses and debt, at least at the aggregate level

In conclusion, the estimation indicates that there is no one-to-one relation between the ownership structure of the firms and their financial results. Differences in performance when they appear could be related to different objectives and mandates but SOEs efficiency and indebtedness do not seem to be particularly negatively affected by these.

APPENDIX 1

Acronyms

Table II.A1.1: Sector acronyms

Industries and subsectors			
Industry	Subsector	Abbreviation	Nace Rev.2***
Energy	Conglomerates*	EC	mult.
Electricity	Transmission	ET	3512
	Distribution	ED	3513
	Generation	EG	3511
	Wholesale	EW	3514
	Retail	ER	3514
Natural Gas	Transmission	GT	3522
	Distribution	GD	3522
	Wholesale	GW	3523
	Retail	GR	3523
Railways	Conglomerates**	RC	mult.
	Infrastructure	RI	5221
	Passenger	RP	4910
	Freight	RF	4920

* As soon as a company operating in the electricity or natural gas industry is involved in more than one subsector, it is considered an Energy Conglomerate.

** As soon as a company is involved in more than one subsector in the railway industry, it is considered a Railway Conglomerate.

*** The Statistical Classification of Economic Activities in the European Community (in French: Nomenclature statistique des activités économiques dans la Communauté Européenne), commonly referred to as NACE, is a European industry standard classification system consisting of a 6 digit code.

Source: Commission services

APPENDIX 2

Econometric results

Table II.A2.1: Estimation output for the electricity subsectors

Electricity generation					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	.08***	-.0225***	.0315***	.106***	.0385***
Minority SOEs	-0.0371	0.0152	.0642***	.11***	.0642***
Turnover	3.90E-09	8.3e-09***	3.10E-09	-1.70E-09	1.40E-09
Constant	.827***	.119***	.0808***	.252***	.0409**
Observations	914	866	666	1067	624
Adjusted R2	0.162	0.302	0.255	0.305	0.2
***p<0.001; ** p<0.01; * p<0.05					
Electricity transmission					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	.471***	-.0897**	.106***	.337***	-1.08E-01
Minority SOEs	-0.00489	0.00746	-0.00897	-0.0985	0.014
Turnover	-6.60E-09	9.9e-09**	-2.30E-09	-1.50E-08	8.10E-09
Constant	.309***	.154***	.0423***	.374***	.182***
Observations	156	133	125	171	120
Adjusted R2	0.928	0.707	0.869	0.682	0.185
***p<0.001; ** p<0.01; * p<0.05					
Electricity distribution					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	1.83E-02	-0.00338	.0367***	-5.61E-02	.0224*
Minority SOEs	-.0389**	.0358***	0.00645	.0776*	0.0131
Turnover	-1.2e-08**	8.9e-09***	9.1e-09***	-3.5e-08***	4.40E-09
Constant	.485***	.0995***	.239***	.337***	.118***
Observations	463	383	382	509	295
Adjusted R2	0.868	0.486	0.778	0.558	0.223
***p<0.001; ** p<0.01; * p<0.05					
Electricity wholesale					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	-9.79E-03	-0.15	-1.69E-03	.316***	-3.60E-01
Minority SOEs	-0.02	-0.115	-0.00012	.363***	-0.211
Turnover	4.50E-09	0.000000041	-1.9e-09***	-1.3e-07***	-1.50E-07
Constant	.986***	-0.0169	.00796***	.58***	0.233
Observations	113	106	112	129	73
Adjusted R2	-0.0589	0.471	0.554	0.572	0.0515
***p<0.001; ** p<0.01; * p<0.05					
Electricity retail					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	-2.07E-03	0.0729	-.014***	4.95E-02	1.59E-01
Minority SOEs	-0.00022	-0.0146	.0076*	.175***	0.0255
Turnover	8.90E-10	-4.4E-09	-1.5e-09***	1.5e-08***	8.90E-09
Constant	1.01***	-.371**	.0294***	.14*	1.09***
Observations	161	161	130	191	98
Adjusted R2	0.346	0.291	0.677	0.507	0.338
***p<0.001; ** p<0.01; * p<0.05					

Source: Commission services

Table II.A2.2: Estimation output for the gas subsectors and energy conglomerates

Gas transmission					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	-1.04E-02	.0812**	.108***	2.19E-02	.0946**
Minority SOEs	-0.0338	-0.0201	.0333*	-0.0535	0.0211
Turnover	6.2e-08***	-2.7e-08*	3.4e-08***	2.10E-08	-2.40E-09
Constant	.355***	.171***	.0768*	.251*	0.0858
Observations	181	161	154	204	118
Adjusted R2	0.686	0.7	0.635	0.493	0.386
***p<0.001; ** p<0.01; * p<0.05					
Gas distribution					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	-.0586**	.0523***	.0754***	.148***	.0638***
Minority SOEs	0.043	-.0447**	0.0287	0.0624	0.0302
Turnover	-1.80E-08	6.1e-08***	-5.0e-08**	1.5e-07***	-6.2e-08*
Constant	.939***	0.00912	.145***	-.629***	.104*
Observations	333	305	258	346	232
Adjusted R2	0.589	0.364	0.554	0.767	0.247
***p<0.001; ** p<0.01; * p<0.05					
Gas wholesale					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	-.0124*	-.43***	.00261***	.198***	2.07E-01
Minority SOEs	-0.0158	-0.181	.00838***	.253***	0.194
Turnover	2.00E-09	-0.000000029	-3.9e-10**	-1.7e-08*	-1.10E-08
Constant	.969***	1.23**	.00686*	0.237	0.489
Observations	73	71	73	83	47
Adjusted R2	0.439	0.409	0.795	0.924	0.5
***p<0.001; ** p<0.01; * p<0.05					
Gas retail					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	-.0763***	-0.0282	.0397***	.451***	-4.12E-02
Minority SOEs	-.0895***	0.0145	.0497***	.364***	-0.0995
Turnover	-3.60E-10	-3.2E-09	2.40E-10	3.1e-08***	-1.30E-08
Constant	.96***	0.00875	.0239**	.18**	-0.028
Observations	123	123	102	139	75
Adjusted R2	0.588	0.383	0.78	0.461	-0.0356
***p<0.001; ** p<0.01; * p<0.05					
Energy conglomerates					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	-8.37E-03	-.029***	.0343***	.0984***	.028**
Minority SOEs	-.0338***	-.0174*	.0179***	.144***	0.00335
Turnover	-4.5e-10***	3.5E-11	1.7e-10*	-6.20E-10	-1.80E-10
Constant	.87***	.126***	.0549***	.242***	.0826**
Observations	1023	861	914	1176	721
Adjusted R2	0.248	0.244	0.462	0.28	0.132
***p<0.001; ** p<0.01; * p<0.05					

Source: Commission Services

Table II.A2.3: Estimation output for the rail subsectors and conglomerates

Rail infrastructure					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	1.72E-02	-0.0306	.273***	.081**	1.01E-02
Minority SOEs	(omitted)	(omitted)	(omitted)	(omitted)	(omitted)
Turnover	3.50E-08	-0.000000049	-7.5e-08**	3.20E-08	-1.20E-07
Constant	.694***	.471*	.71***	-0.135	0.975
Observations	178	158	146	213	136
Adjusted R2	0.438	0.526	0.866	0.475	0.161
***p<0.001; ** p<0.01; * p<0.05					
Rail freight undertakings					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	.0319***	-.0656*	.0779***	2.92E-02	.113***
Minority SOEs	.0382*	-.102*	-.0561*	.253***	-0.131
Turnover	-1.20E-08	7.5E-11	2.6e-08***	-2.30E-08	-3.30E-08
Constant	.946***	.113**	.314***	.394***	.135***
Observations	249	240	189	301	161
Adjusted R2	0.423	0.42	0.863	0.493	0.373
***p<0.001; ** p<0.01; * p<0.05					
Rail passenger undertakings					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	.0237*	-.141***	-.0316*	-4.30E-02	-2.75E-02
Minority SOEs	-0.00995	-.245***	-.0974**	.661***	-0.0415
Turnover	-1.1e-08***	2.0e-08**	6.10E-09	5.40E-09	-4.30E-09
Constant	.978***	.246***	.224***	0.00075	.14***
Observations	192	166	199	236	146
Adjusted R2	0.438	0.561	0.597	0.615	0.0895
***p<0.001; ** p<0.01; * p<0.05					
Rail conglomerates					
Variable	OPEX ratio	ROCE	Staff costs	EA ratio	Inv. rate
Majority SOEs	-.0493**	.0734***	-1.68E-02	8.26E-02	7.40E-02
Minority SOEs	(omitted)	(omitted)	(omitted)	(omitted)	(omitted)
Turnover	3.10E-09	-4.5e-09*	8.00E-09	2.2e-08*	-1.00E-08
Constant	.996***	.219***	.159***	.223***	0.0601
Observations	107	93	102	110	72
Adjusted R2	0.718	0.752	0.669	0.859	0.213
***p<0.001; ** p<0.01; * p<0.05					

Source: Commission services

Table II.A2.4: Overview of sample size for the different estimations

Sector	Subsector	Operating expenses to turnover			Return on capital employed			Staff-cost-to-operating-expenses			Equity-to-Assets			Investment ratio		
		Majority- SOEs	Minority- SOEs	Private	Total	Majority- SOEs	Minority- SOEs	Private	Total	Majority- SOEs	Minority- SOEs	Private	Total	Majority- SOEs	Minority- SOEs	Private
Electricity	Generation	366	108	440	914	338	92	436	866	243	85	338	666	413	118	536
	Transmission	103	22	31	156	83	22	28	133	72	22	31	125	108	22	41
	Distribution	196	64	203	463	160	54	169	383	164	57	161	382	218	69	222
	Wholesale	20	5	88	113	22	5	79	106	18	2	92	112	24	5	100
	Retail	58	25	78	161	61	28	72	161	42	21	67	130	66	28	97
Gas	Transmission	72	28	233	333	69	27	209	305	26	15	217	258	82	27	237
	Distribution	50	42	89	181	38	34	89	161	39	41	74	154	59	46	99
	Wholesale	18	18	37	73	18	19	34	71	17	17	39	73	18	22	43
	Retail	23	6	94	123	23	6	94	123	20	6	76	102	25	6	108
Energy conglomerates		426	424	141	458	1023	383	137	341	426	374	119	421	914	470	166
Rail	Infrastructure operators	105	0	73	178	106	0	52	158	97	0	49	146	130	0	83
	Freight operators	108	17	124	249	108	16	116	240	92	4	93	189	128	17	156
	Passenger operators	94	0	13	107	88	0	5	93	88	0	14	102	90	0	20
	Rail conglomerates	127	4	61	192	120	6	40	166	124	6	69	199	156	4	76

Source: Commission services

2. PERFORMANCE OF STATE-OWNED ENTERPRISES IN SELECTED NEW MEMBER STATES

This chapter analyses the performance of state-owned enterprises vis-à-vis private firms in eight New Member States in the EU, using firm-level data. Profitability and productivity of SOEs tend to be lower than that of private firm across all sectors analysed, and the gap is particularly evident among companies in the manufacturing sectors. The relative underperformance of state-owned enterprises became less pronounced during the crisis, but this is mainly due to a relatively strong deterioration of the performance indicators in the private firms. In addition, and using sectoral data, the analysis also shows that sectoral allocative efficiency is reduced when a larger fraction of the workers is employed in state-owned enterprises. ⁽⁵⁷⁾

2.1. INTRODUCTION

SOEs employ more than nine million people around the world, and have a combined value of 3 trillion of dollars (Christiansen, 2011). Most studies on the performance of state-owned enterprises conclude that these firms are less efficient than their privately owned counterparts (Shirley & Walsh, 2000). To put the topic in historical perspective, it should be noted that in the 1960s, state ownership was a widely diffused practice. The intervention by the state was seen as essential in the post-war recovery. Following the oil crises during the seventies, the questioning of state ownership became far more vocal. Especially since the 1980s, European countries actively started to divest from economic activities owned by the state or other public entities, in order to lower the financial strain on public budget, promote efficiency and market-oriented practices, and raise revenues. During the nineties, the conversion to free market of former socialist economies greatly amplified this phenomenon, and this practice also diffused to developing countries. The present context can thus be seen as the final stages of a transition period, where the direct role

of the state in the economy had greatly diminished. ⁽⁵⁸⁾

Theoretical contributions in the field of corporate ownership are generally based on property rights, public choice or agency theory. Property rights theory states that the variation and separation of property rights within the context of public firms do not incentivise sufficiently the public managers, or the ultimate owners of the firm, the citizens, to pursue the most efficient outcome. Agency theory states instead that the public managers may follow a personal agenda that does not coincide with the firm objectives. Moreover, state-owned enterprises lack some of the external and internal monitoring practices, possibly enabling managers to extract a private rent. Public choice theory relates to the presence of special interests affecting the own objectives of governments. Politicians may act in fact as rent-seekers, or simply pursue objectives too far from efficient outcomes, like pursuing employment for particular interest groups. Cavaliere and Scabrosetti (2008) provide a review of this theoretical literature.

Shirley & Walsh (2000) found in their review that while the performance of SOEs is usually inferior to their counterparts, the effect of ownership was greater in developing nations rather than in industrialized ones. Estrin, Hanousek, Kocenda and Svejnar (2009) find that the change of ownership towards foreign investors in transition countries of east Europe considerably improved performance compared to domestic firms. Isaac, Gallais-Hamonno, Liu and Lutter (1994) consider 23 international airlines with varying levels of state ownership in the period 1973-83. They find that state ownership may decrease productivity in the long run but not necessarily in the short run. An often-cited survey is Megginson and Netter (2001). The authors, after reviewing the results of around 30 studies, support the conclusion that there is at least some evidence that private ownership entails operational and financial advantages. Another relevant survey that confirms

⁽⁵⁷⁾ This chapter was authored by Erik Canton, Peter Pontuch and Jean-Charles Bricongne and the authors would like to thank Massimiliano Rizzati for research assistance.

⁽⁵⁸⁾ Even still communist-ruled countries consider a partial privatization of some of their possessed activities as a viable policy strategy. China demonstrates this with the 1996 policy of "Grasping the large and letting the small go", referring to the practice of transferring ownership in most SOEs aside from the biggest ones.

this result is the work of Shirley and Walsh (2000), concluding that privatised state-owned enterprises perform better. These efficiency gains in connection with private ownership are found both in industrialized and developing countries, and also more surprisingly in the case of monopolistic markets (although to a lesser degree).

However, survey studies not always reach the same conclusions. For instance Bel, Fageda and Warner (2010) perform a meta-regression including 46 different equations on solid waste and water services, finding no significant cost savings in private sectors. In contrast, Carvalho, Marques and Berg (2012) look at studies on water utilities, and conclude that diseconomies of scale and scope are more likely to be found in large publicly owned utilities.

This chapter contributes to the literature by investigating the relationship between the ownership of a firm and its performance in a broad range of industries in a sample of eight New EU Member States. These countries have, during their transition from the centrally-planned model, opted for different degrees of residual state involvement in the economy. This group of countries therefore represents an interesting sample for studying the effects of ownership on performance.

A paper related to our approach is Iootty, Correa, Radas and Skrinjaric (2014), who study productivity performance in state-owned enterprises and private firms in Croatia, using firm-level data. They report evidence that state-owned enterprises feature much lower productivity, and that the gap is increasing over time. A second conclusion in their work is that there is a lack of dynamism in the Croatian economy, which is confirmed in relatively low firm entry and exit rates.

This chapter is structured as follows. The next section introduces the firm-level data base used in the analysis, and the definition of state ownership. Section 2.3 presents the econometric results on the impact of state ownership on several performance indicators, related to both financial performance and efficiency. Section 2.4 investigates the impact of state ownership on sectoral allocative efficiency. So this chapter moves away from the perspective of the individual firm, and investigates effects of state ownership that go beyond firm

performance. This allows us to get some insight into the macro-economic impacts of changes in the fraction of employees working in state-owned enterprises. Section 2.5 investigates the impact of privatisation on performance. Section 2.6 winds up.

2.2. DATA

The firm-level dataset used in this study is obtained from the Bureau Van Dijk ORBIS database and covers eight New Member States: Poland, Czech Republic, Slovakia, Slovenia, Croatia, Bulgaria, and Romania. It contains standard financial variables on balance sheet and income statement items. It also contains additional qualitative information, such as stock market listing, year of incorporation and ownership. The sample is composed of a total of 974 thousand firm-year observations, of which about 25.7 thousand correspond to SOEs.

Raw ORBIS information on the type of the ultimate firm owner (public authority or private entity) has limitations. In particular, it often labels some companies owned by public authorities as private entities. Moreover, it fails to identify in some cases the subsidiaries of publicly-owned companies as publicly-owned. We use an identification algorithm that improves the initial ORBIS public ownership information.⁽⁵⁹⁾ The algorithm first identifies among correctly identified publicly-owned companies commonly occurring keywords designating types of owner entities (ministries, public funds, local authorities, etc.). Using these keywords, misidentified companies' ownership type is corrected. Finally, the algorithm runs a number of rounds of identification of ownership types of companies based on whether they are directly or indirectly (via a chain of controlled companies) controlled by public authorities. The final output of the analysis is therefore a split of ownership between private and public shares for all companies in the sample.

For the purposes of this analysis, firms were defined as SOEs whenever public authorities hold at least 20% of the shares. A higher ownership threshold corresponding to the definition of

⁽⁵⁹⁾ We acknowledge the use of the ownership identification algorithm developed and implemented by Milan Lisicky.

majority-SOEs (50%) was also used as robustness check and does not change fundamentally the results presented here.

Return on equity is defined pre-tax as earnings before taxes divided by shareholder funds. Value added is calculated as EBITDA plus labour expenses. Debt is defined as the sum of long-term debt and loans. Labour productivity is defined as value added divided by the number of employees. To calculate a firm's total factor productivity (TFP), the methodology by Levinsohn and Petrin (2003) is implemented.

2.3. OWNERSHIP AND ECONOMIC PERFORMANCE OF FIRMS IN SELECTED NEW MEMBER STATES

This section presents results of an econometric investigation of the relationship between the ownership of a firm and its performance in a broad range of industries. The assessment focuses on a sample of eight New Member States (Bulgaria, Czech Republic, Croatia, Hungary, Poland, Romania, Slovenia, and Slovakia). These have, during their transition from the centrally-planned model, opted for different degrees of residual state involvement in the economy. This group of countries therefore represents an interesting sample for studying the effects of ownership on performance.

For each sector the following regressions were run

$$\text{Performance}_{i,t} = \alpha + \delta \text{SOE}_i + \beta \text{Control variables}_{i,t} + \gamma F_c + \lambda F_t + \varepsilon_{i,t}$$

where i indicates the firm, t the year, and c the country. Performance is measured by return on equity, leverage, total factor productivity, and labour productivity. The variable of interest here is SOE, which is a dummy variable for state ownership of the firm (taking value 1 if the state holds at least 20% of the shares and 0 otherwise). The following control variables are included: age of the firm (dummies for three categories: 0-3 years; 3-15 years; older than 15 years), size of the firm in terms of workers (dummies for categories: 1-9 employees; 10-49; 50-249; 250 and more employees), size of the firm in terms of capital (dummies for quintiles of the total asset stock of the firm), dummy for listing on the domestic or

regional stock market, dummy for listing on a prestigious foreign stock market, dummy capturing foreign ownership of the firm⁽⁶⁰⁾, the fraction of employees in state-owned enterprises in a given sector. This latter variable is included to capture potential spillovers from the presence of SOEs on other firms, for example when heavily indebted SOEs make it more difficult for private firms to get bank loans. Time and country dummies (F_c and F_t) are also included.⁽⁶¹⁾ Data are collected from the ORBIS data base, covering the period 2004-2013. For the purpose of the following analysis, firms where the state holds at least 20% of the shares are considered as SOEs.⁽⁶²⁾ In terms of the earlier presented definition, these cover both the minority-SOEs and the majority-SOEs.⁽⁶³⁾

2.3.1. Financial performance and state ownership

First it is considered whether state ownership matters for the financial performance of firms, concentrating on profitability (as measured by the return on equity in Graph II.2.1 below and table II.A2.2) and indebtedness (measured by the debt to EBITDA⁽⁶⁴⁾ ratio in Graph II.2.2 and table II.A2.3).⁽⁶⁵⁾ The graphs show the difference

⁽⁶⁰⁾ Foreign owned firms are exposed to the international capital market, and may benefit from positive cross-border spillovers linked with transfer of people, technology and management techniques.

⁽⁶¹⁾ In order to inspect whether the impact of state ownership matters for the outcome variables, we have also included a dummy taking value 1 if the year is a parliamentary election year in the country and zero otherwise, and an interaction term of this dummy with the State-ownership variable. To test whether the coefficient of the ownership variable has changed during the crisis years, we have also included an interaction term between the ownership variable and the crisis period (defined as the period after 2008).

⁽⁶²⁾ A higher ownership threshold corresponding to the definition of majority-SOEs (50%) was also used as robustness check.

⁽⁶³⁾ In case of narrowly defined sectors the number of observed SOEs in the data may become too small for meaningful econometric analysis, but as our sectoral classification is not very detailed we do not encounter this issue in the analysis.

⁽⁶⁴⁾ Earnings before interest, tax, depreciation and amortization.

⁽⁶⁵⁾ The sectors are defined according to the following NACE Rev. 2 codes. Consumer staples C10-C18; Chemical industry C19-C21; Metal processing industry C24-C30; Other manufacturing & repair C31-C33; Energy D35; Public utilities: water supply & waste management E36-E39; Construction F41-F43; Transport and storage H49-H52; Tourism I55, I56, N79, R92, R93; Postal services & ICT H53, J61-J63.

between SOEs and privately held firms before and during the crisis.

The return on equity is systematically lower in state-owned enterprises, compared with privately owned firms, after controlling for a set of other characteristics. The only exception is the transport & storage sector in the crisis period, where the difference in performance is statistically non-significant. This result holds in all investigated sectors, and is quite sizeable. For example, it is found that the return on equity in the metal processing industry is in the state-owned enterprises about 23 pp. lower than in the privately owned firms. The negative performance gap of state-owned enterprises was reduced in the crisis period in several sectors. For example, in public utilities relative underperformance was reduced from -18 pp. before the crisis to -7 pp. during the crisis. A possible explanation could be that state-owned enterprises in these sectors were under pressure to restructure in an environment of tightening budgetary constraints. An alternative explanation is that the improvement in the relative performance of state-owned enterprises (at least partly) reflects a deterioration of the performance of private firms. Indeed, a comparison of the change in the average return on equity between the two periods (pre-crisis and crisis) observed in private and state-owned enterprises reveals that the return on equity showed a more pronounced decrease during the crisis in private firms. In the state-owned enterprises the fall in the return on equity was less pronounced, and in the public utilities sector it even improved somewhat.

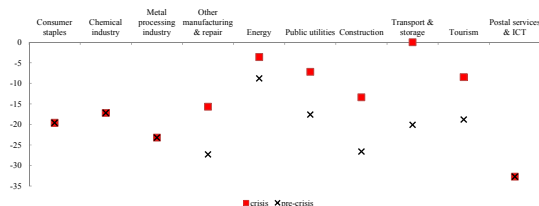
Further reading of table A1 suggests that during an election year, the profitability of state-owned enterprises in energy and public utilities is significantly lower than in other years. The effect is in the order of magnitude of 5 pp. The exact reasons behind this finding cannot be pinned down, but an explanation consistent with the result would be that political pressure to reduce prices of services delivered by these sectors in election years depresses financial performance of the state-owned enterprises.

The state-owned enterprises show a higher indebtedness in several sectors⁽⁶⁶⁾. The difference between state-owned and privately owned firms is

⁽⁶⁶⁾ Measured by the debt-to-EBITDA ratio

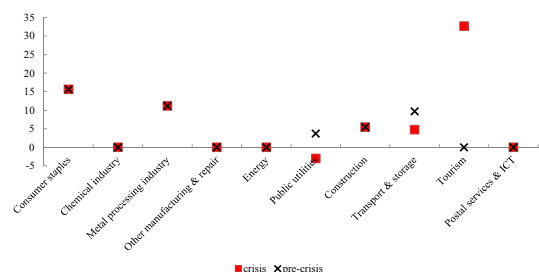
especially striking in the tourism sector, where the situation radically worsened during the crisis years. As before, a further inspection of this observed pattern is carried out by looking at the average debt before and during the crisis in the two types of firms. The pronounced worsening of the relative performance of state-owned enterprises in tourism is driven by a rapid increase in the indebtedness of state-owned enterprises, in combination with a more modest increase in debt in the private firms. In public utilities a reverse pattern is observed: indebtedness increases faster between the two periods in private firms. Analysis at country level reveals for instance that Croatia's state-owned enterprises in the chemical sector are particularly heavily indebted compared with their privately-owned peers. In Slovenia, the indebtedness ratio of state-owned enterprises compared to their privately-owned peers is among the highest in the group of CEE countries.

Graph II.2.1: Return on equity (pp. difference between state-owned enterprises and private firms)



Source: Commission services based on ORBIS. Statistically non-significant effects are reported as zero

Graph II.2.2: Debt-to-EBITDA (pp. difference between state-owned enterprises and private firms)



Source: Commission services based on ORBIS. Statistically non-significant effects are reported as zero

2.3.2. Productivity and state ownership

Following the approach in Iootty, Correa, Radas and Skrinjaric (2014), labour productivity and total factor productivity are used as firm efficiency

indicators. The distinction between labour productivity and TFP is important, as labour productivity tends to increase with capital intensity. So a firm with high labour productivity and high capital intensity may be organised in a less efficient way than a firm with lower labour productivity. The TFP estimates correct for both labour and capital inputs, and thus give a cleaner estimate of overall efficiency of the firm. To calculate a firm's total factor productivity (TFP), the methodology by Levinsohn and Petrin (2003) is implemented.⁽⁶⁷⁾

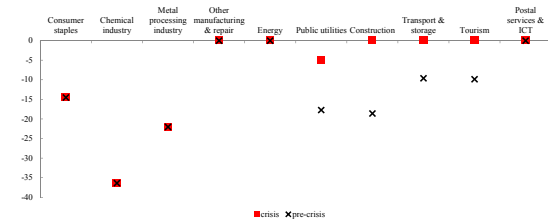
In terms of total factor productivity, SOEs show a worse TFP performance than their private counterparts in the consumer staples, chemical industry and metal processing industry. For example, in the chemical sector SOEs have a 36% lower TFP, and no improvement is seen in the crisis period (cf. Graph II.2.3). In public utilities, construction, transport & storage, and tourism there was a substantially lower TFP of state-owned enterprises before the crisis, but this gap with private firms was reduced or even eliminated during the crisis years.⁽⁶⁸⁾ And in other manufacturing, energy, and postal services & ICT no systematic impact of ownership on TFP in the period considered has been found.

An analysis per country reveals that TFP's relative underperformance in state-owned enterprises is especially problematic for consumer staples in Bulgaria and Hungary, for the chemical sector in Romania, for the metal processing sector in Croatia and Romania, and for public utilities in Slovenia, Croatia, and the Czech Republic.

In most sectors labour productivity of state-owned enterprises is lower than in privately held companies (Graph II.2.4). Some sectors saw a relative improvement of the situation in the crisis period. In transport & storage it is even found that state-owned enterprises have a productivity premium relative to the private firms during the

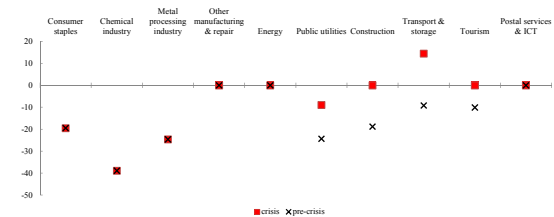
crisis period.⁽⁶⁹⁾ The most worrying sectors are again consumer staples, chemical industry, and metal processing, with clear underperformance and no signs of improvement.

Graph II.2.3: Total factor productivity (% difference between state-owned enterprises and private firms)



Source: Commission services based on ORBIS. Statistically non-significant effects are reported as zero

Graph II.2.4: Labour productivity (% difference between state-owned enterprises and private firms)



Source: Commission services based on ORBIS. Statistically non-significant effects are reported as zero

While sections 7.3.1 and 7.3.2 have only presented the results for a rather broad definition of state ownership⁽⁷⁰⁾, results do not importantly change when a stricter definition of state ownership is applied (50% of ownership, corresponding to a definition of majority-SOEs). Although the econometric analysis controls for a substantial set of background characteristics of firms, prudence on the interpretation of the ownership variable is warranted in both cases, and on should restrain from interpreting the coefficients as causal effects. Put differently, when state-owned enterprises are privatised one should be careful to use the estimated coefficients as approximations for the

⁽⁶⁷⁾ Essentially, the method by Levinsohn and Petrin corrects for productivity shocks unobserved by the researcher but observed by the firm, which would render Ordinary Least Squares estimations inconsistent.

⁽⁶⁸⁾ Exploring this finding in more details learns that in the four sectors where the relative performance of state-owned enterprises has improved during the crisis (i.e. public utilities, construction, transport & storage, and tourism), TFP-levels have improved in the state-owned enterprises and they have deteriorated in the private firms.

⁽⁶⁹⁾ This relative improvement is due to stronger labour productivity deteriorations in private firms than state-owned enterprises for construction and tourism. For public utilities and transport labour productivity in the state-owned enterprises improved, while it went down in private firms.

⁽⁷⁰⁾ To recall, State ownership is defined here as firms in which the State holds at least 20% of the shares.

potential benefits of privatisation. In fact, there may be reasons for a particular firm to be in the public domain which are not here observed and controlled for. Finally, the SOEs that are privatised may be the ones that show already relatively good performance, possibly after undergoing a restructuring process to make the company fit to compete in the marketplace. We will come back to this issue below.

Robustness checks

As a robustness check, two additional control variables are used: the general quality of governance and industry concentration. Indeed, these two indicators may have an influence on performance, the degree of competition or prices, and thus on TFP and returns.

As regards governance, data that have a country and time dimension are used. These series come from the Worldwide Governance Indicators (WGI⁽⁷¹⁾). The WGI cover all the countries of our sample, measuring six dimensions of governance starting in 1996: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. The aggregate indicators are based on several hundred individual underlying variables, taken from a wide variety of existing data sources. The data reflect the views on governance of survey respondents and public, private, and NGO sector experts worldwide. The WGI are suitable for cross-country and over-time comparisons.

Among the six indicators that are available, three are used due to their possible influence on company governance and performance: control of corruption, government effectiveness, and regulatory quality. They are aggregated (due to their relatively high correlation) into a percentile rank.⁽⁷²⁾

As regards concentration, the Herfindahl index for turnover is calculated for each country-sector-year

to give an idea of the market structure of each sector.

The same kind of regressions as in the previous sections are thus performed except that all sectors are pooled together and that variables of governance and concentration have been added and interacted with the SOE status. Given that these variables vary over time, they are not captured by the fixed effects used (covering country-sector and year dimensions). As regards concentration, for example, which has a country-sector-time dimension, the country-sector fixed effects in the regression will capture the overall average level of concentration, while the variable itself will capture the variations over time around this average level.

For simplicity, the following tables show results using the 50% threshold for SOEs. Besides, since governance changes may take time to have a significant influence on company performance, these are considered with lags up to three years.

Concerning the coefficients related to the two control variables (governance and concentration), one can notice that higher concentration increases the negative gap for TFP of SOEs (see the coefficients of the interacted variable "Concentration * SOE_dum_50" in Table II.2.1).

Improved governance has a positive effect both for the productivity and the profitability of SOEs, whatever the lag that is considered, and this effect compensates the negative global effect that governance initially has on all firms after two (see the respective coefficients of the variables "Governance with two lags" and "Governance with two lags * SOE_dum_50" of Table II.2.1) or three years (see the respective coefficients of the variables "Governance with three lags" and "Governance with three lags * SOE_dum_50" of Table II.2.2)⁽⁷³⁾.

⁽⁷¹⁾ See Kaufmann, Daniel, Aart Kraay and Massimo Mastruzzi (2010)

⁽⁷²⁾ Percentile ranks have been taken because their aggregation is simpler and it is considered that performance depends on the position of a given country compared with the others. The absolute values of the indicators have a correlation coefficient with percentiles ranks above 0.98.

⁽⁷³⁾ The coefficient of the non-interacted concentration variable is positive in table II.2.2, which is consistent with the fact that more concentration induces more profits for concentrated companies, even if it may be at the expense of productivity and sold volumes. The sign of this coefficient fluctuates in table 1, which may be explained by the fact that concentration may be influenced by (lagged) governance, and that there may be some collinearity between the two variables. When governance is used without lag, concentration has the expected negative sign.

Table II.2.1: Dependent variable: $\ln(TFP)$, whole period

Variables \ Governance:	no lag	lag 1	lag 2	lag 3
foreign_list	-0.014 (0.043)	-0.006 (0.044)	-0.026 (0.046)	-0.054 (0.050)
dom_list	-0.336 (0.008)***	-0.359 (0.008)***	-0.363 (0.009)***	-0.367 (0.009)***
foreign_dum_50	0.121 (0.002)***	0.157 (0.002)***	0.169 (0.003)***	0.180 (0.003)***
soe_dum_50	-1.787 (0.319)***	-1.871 (0.326)***	-2.164 (0.350)***	-2.060 (0.371)***
Csoe_dum_50	0.134 (0.011)***	0.133 (0.012)***	0.122 (0.013)***	0.117 (0.015)***
Esoe_dum_50	-0.017 (0.012)	-0.022 (0.012)*	0.005 (0.014)	-0.001 (0.014)
Concentration	-0.007 (0.002)***	0.007 (0.002)***	0.008 (0.003)***	-0.008 (0.003)***
Concentration * SOE_dum_50	-0.028 (0.006)***	-0.033 (0.007)***	-0.032 (0.007)***	-0.025 (0.008)***
Governance	-1.020 (0.032)***			
Governance * SOE_dum_50	0.290 (0.059)***			
Governance with 1 lag		-0.555 (0.037)***		
Governance with 1 lag * SOE_dum_50		0.303 (0.060)***		
Governance with 2 lags			-0.196 (0.037)***	
Governance with 2 lags * SOE_dum_50			0.357 (0.065)***	
Governance with 3 lags				0.195 (0.042)***
Governance with 3 lags * SOE_dum_50				0.341 (0.069)***
# of observations	923,093	750,045	624,770	529,443
R-squared	0.11	0.12	0.12	0.13
RMSE	0.77	0.72	0.70	0.70

* p<0.1; ** p<0.05; *** p<0.01

Note: country*sector and year are included but not reported

Source: Commission services

Besides, the magnitude of the coefficient of the non-interacted concentration is much smaller than the one of the coefficient of the interaction with the SOE status.

The main result is that the coefficient related to the SOE dimension is always significant with a negative sign, and that the coefficient related to the SOE dimension interacted with the crisis period

Table II.2.2: Dependent variable: return on equity (winsorized), whole period

Variables \ Governance:	no lag	lag 1	lag 2	lag 3
foreign_list	0.108 (0.032)***	0.088 (0.033)***	0.095 (0.034)***	0.094 (0.037)**
dom_list	-0.244 (0.006)***	-0.219 (0.006)***	-0.205 (0.006)***	-0.202 (0.007)***
foreign_dum_50	-0.012 (0.002)***	-0.008 (0.002)***	-0.007 (0.002)***	-0.010 (0.002)***
soe_dum_50	-2.740 (0.237)***	-2.102 (0.244)***	-1.854 (0.257)***	-1.532 (0.270)***
Csoe_dum_50	0.127 (0.008)***	0.115 (0.009)***	0.104 (0.009)***	0.095 (0.011)***
Esoe_dum_50	-0.013 (0.009)	-0.011 (0.009)	-0.007 (0.010)	-0.007 (0.010)
Concentration	0.010 (0.001)***	0.015 (0.002)***	0.013 (0.002)***	0.003 (0.002)
Concentration * SOE_dum_50	0.008 (0.005)*	0.005 (0.005)	0.002 (0.005)	0.003 (0.006)
Governance	-0.924 (0.024)***			
Governance * SOE_dum_50	0.474 (0.044)***			
Governance with 1 lag		-0.720 (0.027)***		
Governance with 1 lag * SOE_dum_50		0.355 (0.045)***		
Governance with 2 lags			-0.451 (0.027)***	
Governance with 2 lags * SOE_dum_50			0.308 (0.048)***	
Governance with 3 lags				-0.250 (0.030)***
Governance with 3 lags * SOE_dum_50				0.249 (0.050)***
# of observations	842,105	690,055	577,980	490,707
R-squared	0.09	0.08	0.06	0.05
RMSE	0.55	0.52	0.50	0.49

* p<0.1; ** p<0.05; *** p<0.01

Note: country*sector and year are included but not reported

Source: Commission services

remains positive and significant. These two results are thus robust.

It should be noticed that the magnitude of the coefficient related to the SOE dimension ("soe_dum_50") seems to be higher than in benchmark regressions. In fact, when calculating the marginal effect of soe_dum_50, one should take into account the coefficient of this variable and also the ones of this variable interacted with

the Herfindahl coefficient and governance (taking into account the average value of these variables). The results are thus very close to the ones of the coefficient without any variable of interaction:

- For the return on equity, the marginal effect with average values is equal to -0.2372, to be compared with -0.2676 without interaction.

- For TFP, the marginal effect with average values is equal to -0.1497, to be compared with -0.1549 without interaction.

2.4. ALLOCATIVE EFFICIENCY AND STATE OWNERSHIP

According to Boone (2008), productive resources such as labour and capital are channelled towards their most efficient use in competitive markets. To use this view on competition, the analysis applies the method developed in European Commission (2013 a). An inefficient use of resources reflects a situation of malfunctioning markets because of weak competitive forces. In a competitive environment the most productive firms gain the largest market shares. Barriers to competition can prevent reallocation of resources, enabling inefficient firms to survive while hampering growth of the efficient companies. These facets can be summarised by the indicator on allocative efficiency. This indicator measures the extent to which the most productive firms have the largest market share. Negative numbers of the allocative efficiency index point at forces in the economy preventing competition to work properly, such as excessive regulation, rent-seeking, ineffective procurement, clientelism. The allocative efficiency indicator is computed using a sector-level variant of the productivity decomposition developed by Olley and Pakes (1996):

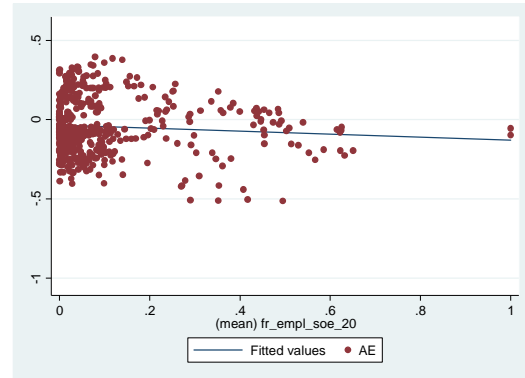
$$\begin{aligned}
 P_{jt} &= \sum_{i \in J} \theta_{it} P_{it} \\
 &= \frac{1}{n} \sum_{i \in J} P_{it} \\
 &\quad + \underbrace{\sum_{i \in J} (\theta_{it} - \bar{\theta}_{jt}) (P_{it} - \bar{P}_{jt})}_{AE}
 \end{aligned}$$

where P_{jt} is labour productivity (in logs) of industry j in year t , N is the number of firm size classes i in industry J , θ_{it} is the market share of firms within size class i , and bars indicate industry-level averages. We use industry-level data available from Eurostat, covering the time period 2000-2012 and including most EU countries (data on Greece and Malta is very limited). We combine NACE Rev. 2 and NACE Rev. 1.1 data for sectors

in which there is a (close to) one-to-one correspondence in the sectoral classification systems, and only use NACE Rev. 2 data if such unique correspondence does not exist. The included NACE Rev. 2 sectors are C, G, H, I, J (defined as tradeables), and F, L, M, N (defined as nontradeables).

This section next studies if there is a relationship between allocative efficiency and prominence of state-owned enterprises in the sector. Graph II.2.5 shows the correlation between the AE indicator (vertical axis) and the fraction of workers employed in state-owned enterprises (horizontal axis). The depicted correlation is negative: sectors in which a larger fraction of the workers is employed in a state-owned enterprise tend to show lower allocative efficiency. This result is confirmed in a more formal regression framework, see Table II.2.3.

Graph II.2.5: Allocative efficiency and fraction of workers employed in state owned enterprises



Source: Commission services based on data from Eurostat and ORBIS

Table II.2.3: **AE and SOE**

VARIABLES	(1) AE	(2) AE	(3) AE
fr_empl_soe_20	-0.178*** -0.0456	-0.147** -0.0571	-0.250*** -0.0552
I_TRAD		-0.0695 -0.0781	
I_crisis			0.129** -0.0559
tradeables	0.173*** -0.0219	0.192*** -0.0303	0.164*** -0.0222
crisis	0.00249 -0.00868	0.00272 -0.00868	-0.00936 -0.0101
Observations	499	499	499
R-squared	0.766	0.766	0.768

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Commission services

The table shows the regression results where the sectoral indicator for allocative efficiency is explained from the fraction of employees in state-owned enterprises using the earlier mentioned 20% criterion to define public ownership (fr_empl_soe_20), as well as some other control variables, namely dummies for the crisis period (crisis) and if the sector belongs to the category of tradeables or non-tradeables, as well as interaction terms between these dummies and the fraction of employees in state-owned enterprises ($I_TRAD = fr_empl_soe_20 \times TRAD$; $I_crisis = fr_empl_soe_20 \times crisis$). Country- and sector-dummies are included. The coefficient on the fraction of employees in state-owned enterprises is statistically and economically significant. For example, according to the results in the second column, a 10%-point reduction in the sectoral fraction of employees in public firms would increase allocative efficiency by 14.7%. Using the estimated relationship between allocative efficiency and labour productivity as reported in European Commission (2013 a), this would generate a rise in average labour productivity by 10.7%. This result suggests macro-relevant benefits from privatizations of state-owned enterprises.

In Table II.A2.6 we study the role of cross-country differences in the coefficient of the fraction of workers in state-owned enterprises, by adding interaction terms between the fraction of workers in state-owned enterprises and country dummies. Significant interaction terms are found for Hungary and Slovakia, where the total impact on AE is stronger than in the other countries, and for

Romania where the total impact on AE is much weaker (and actually vanishes).

2.5. RELATIVE IMPACT OF PRIVATISATIONS ON PERFORMANCE

When assessing the impact of the SOE status on productivity and profitability, privatisation events represent valuable information for empirical analysis for two reasons. First, privatisations could reveal that the results on SOE performance may be biased due to a selection effect. Indeed, governments may choose to privatize in priority the best performing companies to be able to sell them more easily and at a higher price. Thus, the remaining SOEs would be structurally less performing than private companies. Second, privatisations can also shed some light on our preceding findings regarding the effects of state-ownership, as they could bring these results one step closer to causality, rather than showing mere correlations.

To see to what extent privatised firms were relatively more or less performing around a privatisation event compared with benchmark SOEs, a sub-sample of privatised companies is selected.⁽⁷⁴⁾ The relative performance in terms of return on equity and return on assets are analysed over time.⁽⁷⁵⁾ The benchmark performance

(74) The sources of data of privatisations are Privatization Barometer (<http://www.privatizationbarometer.net/database.php>, which is a database of privatization transactions from 1977 to present, monthly updated) and World Bank, which provides information on privatization transactions of at least USD 1 million in developing / emerging countries from 2000 to 2008 (<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTFINANCIALSECTOR/0,contentMDK:22936580-m enuPK:7994350-pagePK:210058-piPK:210062-theSitePK:282885,00.html>).

(75) TFP comparisons were not possible as the estimates of TFP were only available to a limited subsample of our privatised number of companies. Comparisons have also been made with apparent labour productivity: the relative performance gap is calculated as the log labour productivity of a privatised SOE minus the benchmark, which is equal to the median log labour productivity of non-privatised SOEs operating in the same sector and in the reference country cluster. The findings confirm that there is no over-performance before privatization in favour of companies to be privatized. Besides, once privatization has taken place, there seems to be some increase in apparent labour productivity, which is noticeable both on average and with median/quartiles. Yet, these results are fragile due to the size of the sample (26 firms) and the fact

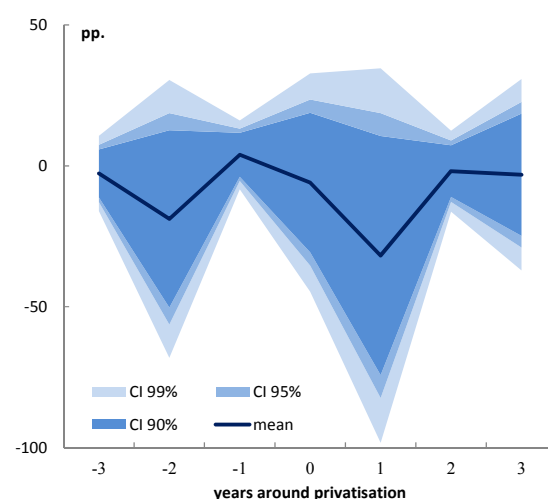
indicators are estimated as the median performance of non-privatised SOEs in the same 2-digit NACE rev. 2 industry in the same year and regional country cluster.⁽⁷⁶⁾

The following graphs display averages and quantiles of the distribution of the relative performance indicators for return on equity (graphs II.2.6 and II.2.7) and return on assets (graphs II.2.8 and II.2.9). The respective variables used are as follows:

- E (return on equity): the relative performance gap is calculated as the return on equity of a privatised SOE minus the benchmark, which is equal to the median return on equity of non-privatised SOEs in the same sector and in the reference country cluster. The graphs II.2.6 and II.2.7 display this performance gap expressed in percentage points.
- ROA (return on assets): the relative performance gap is calculated as the return on assets of a privatised SOE minus the benchmark, which is equal to the median return on assets of non-privatised SOEs in the same sector and in the reference country cluster. The graphs II.2.8 and II.2.9 present this performance gap expressed in percentage points.
- Taking into account the standard errors of the estimates, whatever the indicator that is considered, there does not seem to be any relative over-performance of firms that are to be privatized, before this event takes place. The graphs with medians and quartiles tend to confirm this stylized fact.

- Once privatization has taken place, results are not clear-cut with returns on equity, where some negative outliers drive the average in the year after the privatisation. As regards returns on assets, some improvement can be seen in the performance over time, which admittedly already starts the year preceding the sale, though not significant at the 10% level, being given the time span three years before and after privatizations) that is considered.

Graph II.2.6: Average relative return on equity of privatized companies (time0=year of privatization)

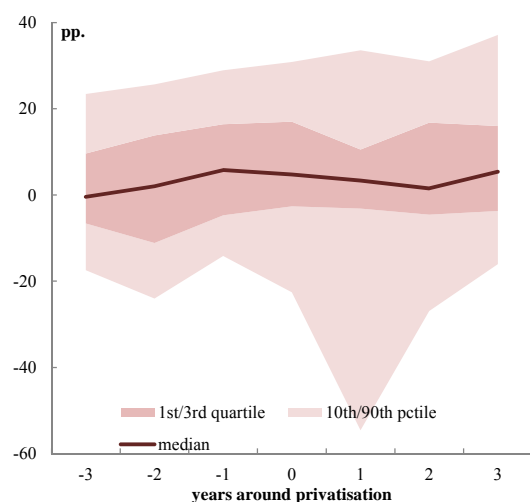


Source: Commission services

that values may be quite high for average and median values and for extreme confidence intervals/percentiles. The reason for these large values may be linked to a denominator close to zero. Being given the calculations that have been performed for labour productivity, this could occur either: 1. when the benchmark productivity is close to zero or 2. When the privatised entity has a large value added with few employees. For these reasons, results have not been displayed, even if they go in the expected direction.

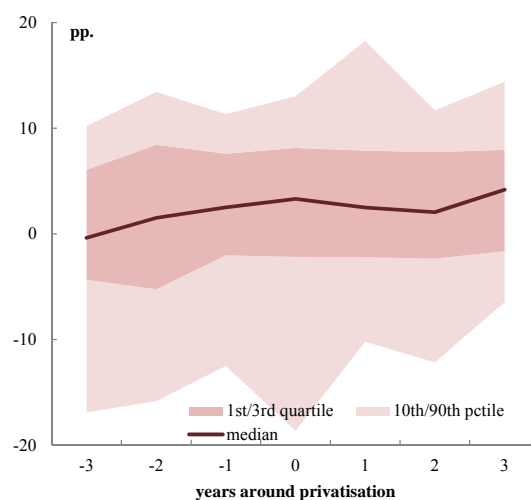
⁽⁷⁶⁾ Three regional country clusters were used. The first cluster is composed of PL, CZ, SK, and HU, the second cluster is BG and RO, and the third cluster is SI and HR.

Graph II.2.7: Median relative return on equity of privatized companies (time0=year of privatization)



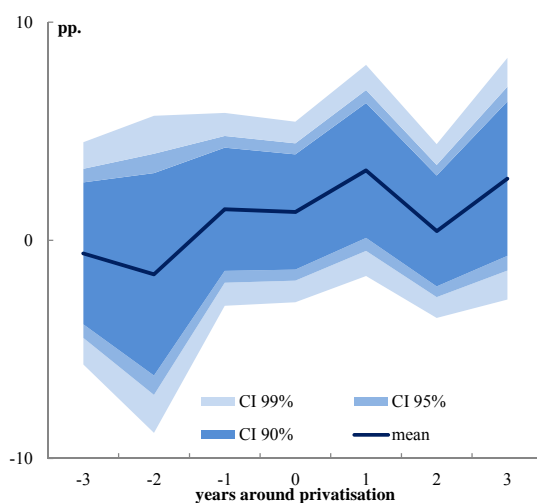
Source: commission services

Graph II.2.9: Median relative return on assets of privatized companies (time0=year of privatization)



Source: Commission services

Graph II.2.8: Average relative return on assets of privatized companies (time0=year of privatization)



Source: Commission services

2.6. CONCLUSIONS

In the analysed New Member States, while profitability and productivity of SOEs tend to be lower than that of private firm across all sectors analysed, the gap is particularly evident among companies in the manufacturing sectors. Unlike network industries, these are sectors where there is no a priori need for public service provision and where SOEs would be expected to operate like private businesses as they face high competitive pressure. The underperformance of SOEs in a significant share of the economy may require further inspection of the underlying factors (e.g., governance, quality of management).

An interesting finding is that in the studied countries the gap between the performance of SOEs and private companies tended to become smaller (or statistically insignificant), during the crisis. These dynamics are mostly due to a worsening of the results of the private companies and to a relatively less affected performance of SOEs. An open question is whether pre-crisis performance gaps will again become reality if private firms would show faster recovery from the crisis years.

Finally, this chapter has investigated whether the presence of state-owned enterprises has an impact on sectoral allocative efficiency. Results indicate

that sectors in which a larger fraction of workers is employed in state-owned enterprises tend to feature lower allocative efficiency, and this effect is statistically and economically significant.

APPENDIX 3

Econometric results

Table II.A3.1: Sectors included in the estimations

Column in table	Description	NACE Rev. 2
-1	Consumer staples	C10-C18
-2	Chemical industry	C19-C21
-3	Metal processing industry	C24-C30
-4	Other manufacturing & repair	C31-C33
-5	Energy	D35
-6	Public utilities; water supply; waste management	E36-E39
-7	Construction	F41-F43
-8	Transport and storage	H49-H52
-9	Tourism	I55, I56, N79, R92, R93
-10	Postal services and ICT	H53, J61-J63

Source: Commission services

Table II.A3.2: Return on equity and state ownership (dep. variable: ROE)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SOE	-0.196***	-0.172**	-0.232***	-0.273***	-0.0875***	-0.176***	-0.266***	-0.201***	-0.188***	-0.327***
Crisis x SOE	-0.0429	-0.0715	-0.0301	-0.0447	-0.0214	-0.0145	-0.0261	-0.0221	-0.0396	-0.052
Election x SOE	0.00487	0.0354	0.0311	0.116**	0.0522**	0.104***	0.132***	0.0369	0.103**	0.0678
	-0.0525	-0.0865	-0.0372	-0.0542	-0.0235	-0.0147	-0.0311	-0.0245	-0.0461	-0.0612
	0.0286	0.0173	0.0172	0.0846	-0.0500*	-0.0410**	-0.0401	-0.0401	-0.0427	0.00677
	-0.0584	-0.0937	-0.0414	-0.0606	-0.0256	-0.017	-0.035	-0.0268	-0.0505	-0.0667
Age 0_3	0.203***	-0.0103	0.167***	0.290***	0.119***	0.0570***	0.236***	0.182***	0.0682***	0.180***
	-0.00999	-0.0276	-0.00837	-0.0163	-0.0224	-0.017	-0.00905	-0.0121	-0.0184	-0.0195
Age 3_15	0.0497***	0.00854	0.0284***	0.0505***	0.0145	0.00603	0.0373***	0.0289***	0.0232*	0.0690***
	-0.00595	-0.014	-0.00478	-0.00946	-0.0151	-0.00956	-0.00584	-0.00866	-0.0131	-0.0132
Empl. 1_9	0.0616***	0.0976***	0.132***	0.188***	0.179***	0.116***	0.0948***	0.212***	-0.102***	0.00716
	-0.0102	-0.0277	-0.00966	-0.0193	-0.0232	-0.0189	-0.0125	-0.016	-0.0252	-0.0242
Empl. 10_49	-0.0184**	0.0133	0.0460***	0.0685***	0.0645***	0.000451	0.0137	0.0480***	-0.207***	-0.0886***
	-0.00797	-0.0209	-0.00761	-0.016	-0.0206	-0.015	-0.0118	-0.0146	-0.0237	-0.022
Empl. 50_249	0.00248	0.012	0.0224***	0.0224	0.0229	-0.0361***	-0.000609	0.00559	-0.133***	-0.0596***
	-0.0073	-0.0184	-0.00656	-0.0143	-0.0194	-0.0131	-0.0114	-0.0134	-0.0232	-0.021
Size quintile 1	0.254***	0.299***	0.174***	0.0894***	-0.0197	0.178***	0.170***	0.108***	0.340***	0.118***
	-0.00724	-0.027	-0.00798	-0.0148	-0.0304	-0.0155	-0.00744	-0.0123	-0.0142	-0.0168
Size quintile 2	0.128***	0.165***	0.109***	0.0242*	0.0687***	0.0734***	0.0808***	0.0255**	0.233***	0.0987***
	-0.00683	-0.0208	-0.00688	-0.0133	-0.026	-0.0135	-0.00696	-0.011	-0.0143	-0.0162
Size quintile 3	0.0864***	0.0779***	0.0620***	0.012	0.00299	0.0556***	0.0742***	0.0219**	0.157***	0.0782***
	-0.00662	-0.0181	-0.00624	-0.0125	-0.0199	-0.0122	-0.00669	-0.0105	-0.0145	-0.0158
Size quintile 4	0.0550***	0.0467***	0.0301***	0.00997	-0.0227	0.0389***	0.0447***	0.0133	0.0717***	0.0536***
	-0.00628	-0.0151	-0.00553	-0.0117	-0.015	-0.0105	-0.00637	-0.00998	-0.0139	-0.015
Foreign ownership	0.0263***	-0.0174	-0.0141***	0.0491***	-0.0108	0.0123	-0.0433***	0.0493***	0.012	-0.0452***
	-0.00529	-0.0122	-0.00452	-0.0098	-0.0145	-0.0117	-0.00797	-0.00801	-0.0132	-0.0102
Election	0.00596	0.000266	0.00631	0.00385	0.0404**	0.0309***	0.00760*	0.0044	-1.76E-05	0.0232**
	-0.00419	-0.0117	-0.00417	-0.0075	-0.0159	-0.0108	-0.00427	-0.00632	-0.00885	-0.00978
Observations	91,196	8,368	85,546	23,589	8,113	15,923	93,490	48,688	35,235	20,642
R-squared	0.063	0.074	0.071	0.08	0.042	0.101	0.1	0.068	0.067	0.062
Standard errors in parentheses										
***, p<0.01, ** p<0.05, * p<0.1										
Source: Commission services										

Table II.A3.3: Debt and state ownership (dep. variable: Debt/EBITDA)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SOE	15.64***	10.05	11.17***	3.369	-1.078	3.692***	5.481***	9.731***	6.764	3.164
	-4.931	-11.49	-2.832	-2.984	-1.929	-1.019	-1.962	-1.166	-8.952	-2.359
Crisis x SOE	0.206	0.951	1.997	0.985	-2.555	-6.664***	-2.136	-4.955***	32.66***	1.918
	-5.979	-14.52	-3.42	-3.566	-2.15	-1.073	-2.365	-1.309	-10.48	-2.795
Election x SOE	-10.94	4.279	-3.355	-4.729	0.695	0.848	-0.51	-0.217	-25.38**	-4.677
	-6.72	-15.64	-3.826	-3.983	-2.335	-1.242	-2.675	-1.436	-11.5	-3.048
Age 0_3	2.310**	14.34***	6.345***	0.471	1.317	7.599***	-2.794***	1.903***	15.40***	4.503***
	-1.051	-4.407	-0.731	-1.025	-1.99	-1.199	-0.64	-0.61	-3.736	-0.852
Age 3_15	1.094*	-1.19	0.34	-0.2	3.234**	2.295***	1.038**	2.115***	9.646***	1.060*
	-0.641	-2.273	-0.426	-0.598	-1.35	-0.67	-0.417	-0.443	-2.745	-0.583
Empl. 1_9	8.178***	7.183	2.347***	0.106	11.49***	10.93***	21.73***	4.715***	24.58***	6.179***
	-1.2	-4.712	-0.895	-1.278	-2.085	-1.36	-0.94	-0.846	-5.528	-1.113
Empl. 10_49	3.793***	3.391	1.102	-0.0515	2.762	9.203***	12.28***	4.906***	17.67***	4.766***
	-0.938	-3.48	-0.703	-1.06	-1.863	-1.092	-0.898	-0.766	-5.221	-1.004
Empl. 50_249	2.105**	-0.271	1.151*	0.506	-0.916	3.858***	5.794***	3.468***	3.506	2.920***
	-0.847	-3.005	-0.597	-0.938	-1.738	-0.938	-0.863	-0.694	-5.104	-0.946
Size quintile 1	-1.056	-9.431*	0.496	2.440**	2.187	-0.591	-8.409***	6.047***	-19.68***	0.807
	-0.856	-4.828	-0.753	-1.013	-2.867	-1.162	-0.572	-0.673	-3.091	-0.794
Size quintile 2	-3.505***	-7.092*	-2.059***	0.411	-4.099*	-1.41	-9.362***	-0.641	-20.71***	-1.949**
	-0.814	-3.662	-0.648	-0.895	-2.446	-1.006	-0.539	-0.602	-3.2	-0.763
Size quintile 3	-2.970***	-4.824	-1.070*	-0.154	-0.69	-1.342	-8.388***	-1.086*	-18.29***	-0.852
	-0.783	-3.207	-0.586	-0.833	-1.878	-0.903	-0.518	-0.574	-3.261	-0.74
Size quintile 4	-1.138	-4.705*	0.0648	0.73	0.121	-0.714	-3.827***	-0.827	-13.57***	-1.493**
	-0.731	-2.624	-0.512	-0.78	-1.339	-0.766	-0.487	-0.54	-3.09	-0.69
Foreign ownership	2.102***	-1.503	3.228***	-0.31	0.472	1.684**	8.326***	3.755***	11.97***	0.0793
	-0.65	-2.092	-0.425	-0.685	-1.311	-0.854	-0.62	-0.44	-2.894	-0.496
Election	-1.833***	-2.342	-1.125***	-0.529	-1.828	-1.631**	-1.307***	-1.545***	-3.18	-0.239
	-0.497	-2.033	-0.401	-0.523	-1.455	-0.813	-0.337	-0.35	-1.966	-0.466
Observations	71,357	6,890	73,480	19,247	7,621	13,487	74,197	38,834	32,929	16,514
R-squared	0.032	0.017	0.022	0.065	0.119	0.065	0.095	0.103	0.016	0.075

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Commission services

Table II A3.4: TFP and state ownership (dep. variable: log TFP)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SOE	-0.157***	-0.452***	-0.249***	0.0452	0.0119	-0.195***	-0.206***	-0.101***	-0.104*	-0.0352
Crisis x SOE	-0.0524	-0.119	-0.0355	-0.0572	-0.0418	-0.0192	-0.0356	-0.0262	-0.055	-0.0645
	0.0343	0.0425	-0.0106	0.0526	0.0358	0.145***	0.160***	0.132***	0.124*	0.0121
	-0.0634	-0.144	-0.0432	-0.0681	-0.0459	-0.0195	-0.0421	-0.0291	-0.064	-0.0753
Election x SOE	-0.0583	0.0558	-0.0155	-0.00528	-0.0318	-0.0181	0.0278	-0.00979	0.013	-0.0252
	-0.0708	-0.157	-0.0482	-0.0759	-0.0499	-0.0224	-0.0473	-0.032	-0.0701	-0.0818
Age 0_3	-0.0301***	-0.365***	-0.139***	0.0463**	-0.0547	-0.125***	-0.00311	-0.0661***	-0.207***	-0.0409*
	-0.0115	-0.0447	-0.00969	-0.0204	-0.0431	-0.022	-0.012	-0.0141	-0.023	-0.0232
Age 3_15	0.0324***	-0.0308	0.0110*	0.0500***	-0.0326	0.00896	-0.0248***	-0.0051	-0.0239	0.00552
	-0.00713	-0.0235	-0.00573	-0.012	-0.0298	-0.0128	-0.00788	-0.0103	-0.0174	-0.0163
Empl. 1_9	-0.203***	-0.363***	-0.0924***	-0.132***	-0.0974***	-0.385***	-0.543***	-0.300***	-0.934***	-0.0257
	-0.0119	-0.0451	-0.0114	-0.0242	-0.0444	-0.0247	-0.0167	-0.0186	-0.0337	-0.0291
Empl. 10_49	-0.287***	-0.181***	-0.0955***	-0.143***	-0.0734***	-0.347***	-0.359***	-0.295***	-0.801***	-0.0489*
	-0.00952	-0.0346	-0.00905	-0.0203	-0.0399	-0.02	-0.016	-0.0171	-0.0321	-0.0266
Empl. 50_249	-0.121***	-0.0199	0.0134*	-0.0478***	-0.459***	-0.179***	-0.128***	-0.148***	-0.430***	0.0513**
	-0.00877	-0.0305	-0.00784	-0.0182	-0.0377	-0.0175	-0.0155	-0.0158	-0.0316	-0.0254
Size quintile 1	0.329***	0.515***	0.568***	0.613***	-0.370***	0.340***	0.461***	0.0761***	0.127***	0.502***
	-0.0084	-0.0439	-0.00925	-0.0185	-0.0577	-0.0199	-0.00971	-0.014	-0.0183	-0.02
Size quintile 2	0.256***	0.413***	0.444***	0.468***	-0.142***	0.289***	0.405***	0.224***	0.234***	0.380***
	-0.00809	-0.0341	-0.00813	-0.0168	-0.0499	-0.0177	-0.00926	-0.0129	-0.0189	-0.0196
Size quintile 3	0.208***	0.260***	0.321***	0.331***	-0.243***	0.263***	0.332***	0.221***	0.233***	0.293***
	-0.00788	-0.03	-0.00741	-0.0159	-0.0388	-0.0161	-0.00895	-0.0124	-0.0193	-0.019
Size quintile 4	0.116***	0.182***	0.174***	0.213***	-0.202***	0.203***	0.176***	0.149***	0.0890***	0.175***
	-0.00754	-0.0251	-0.00661	-0.015	-0.0286	-0.014	-0.00854	-0.0118	-0.0187	-0.0182
Foreign ownership	0.132***	0.0136	0.0388***	0.135***	0.170***	0.168***	0.0314***	0.129***	0.0095	0.365***
	-0.00609	-0.02	-0.00526	-0.0121	-0.0276	-0.0152	-0.0103	-0.0091	-0.0162	-0.0122
Election	0.0266***	0.019	0.0236***	0.0198**	0.0254	0.0259*	0.0341***	0.0260***	0.0532***	0.0329***
	-0.00493	-0.0194	-0.00495	-0.00947	-0.0303	-0.0141	-0.00571	-0.00737	-0.0112	-0.0117
Observations	101,073	8,818	91,067	25,244	8,729	16,790	100,618	54,282	46,667	22,353
R-squared	0.029	0.055	0.077	0.106	0.155	0.064	0.056	0.026	0.048	0.096
Standard errors in parentheses										
*** p<0.01, ** p<0.05, * p<0.1										
Source: Commission services										

Table II.A3.5: Labour productivity and state ownership (dep. variable: log labour productivity)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SOE	-0.217***	-0.494***	-0.283***	-0.044	0.0288	-0.280***	-0.209***	-0.0975***	-0.107*	0.0189
Crisis x SOE	-0.0596	-0.136	-0.0409	-0.064	-0.0527	-0.0218	-0.0423	-0.0305	-0.0616	-0.0753
Election x SOE	0.0841	0.0515	0.0641	0.0731	-0.0481	0.186***	0.152***	0.232***	0.0856	-0.0161
	-0.0721	-0.165	-0.0498	-0.0762	-0.0579	-0.0221	-0.0499	-0.0338	-0.0716	-0.0879
	-0.0119	0.0426	-0.0159	0.0326	-0.02	-0.0147	0.0152	0.0104	0.0286	0.00321
	-0.0804	-0.179	-0.0556	-0.0849	-0.063	-0.0255	-0.0561	-0.0371	-0.0785	-0.0954
Age 0_3	-0.0506***	-0.348***	-0.123***	0.0480**	0.122**	-0.144***	0.0626***	0.0293*	-0.271***	-0.0395
	-0.0131	-0.0511	-0.0112	-0.0228	-0.0543	-0.025	-0.0143	-0.0164	-0.0258	-0.0271
Age 3_15	0.0334***	-0.0216	0.0284***	0.0633***	0.0356	0.0341**	0.0159*	0.0154	-0.0396**	0.0308
	-0.00809	-0.0268	-0.0066	-0.0135	-0.0376	-0.0145	-0.00936	-0.012	-0.0195	-0.019
Empl. 1_9	1.058***	0.862***	1.355***	1.518***	1.056***	1.062***	0.919***	1.375***	0.674***	0.964***
	-0.0137	-0.0518	-0.0132	-0.0272	-0.0561	-0.0282	-0.0199	-0.0217	-0.0378	-0.034
Empl. 10_49	0.499***	0.348***	0.651***	0.837***	0.310***	0.430***	0.456***	0.691***	0.257***	0.479***
	-0.0108	-0.0395	-0.0104	-0.0227	-0.0503	-0.0227	-0.019	-0.0199	-0.0359	-0.031
Empl. 50_249	0.187***	-0.0231	0.182***	0.345***	-0.0979**	0.0455**	0.117***	0.193***	0.105***	0.128***
	-0.00996	-0.0349	-0.00903	-0.0204	-0.0476	-0.0199	-0.0184	-0.0184	-0.0354	-0.0296
Size quintile 1	-1.330***	-1.364***	-1.308***	-1.421***	-1.980***	-1.363***	-1.361***	-1.712***	-1.290***	-1.457***
	-0.00956	-0.0502	-0.0107	-0.0207	-0.0728	-0.0226	-0.0115	-0.0163	-0.0205	-0.0234
Size quintile 2	-0.874***	-0.914***	-0.849***	-0.942***	-1.345***	-0.910***	-0.842***	-0.985***	-0.706***	-0.943***
	-0.0092	-0.039	-0.00938	-0.0188	-0.0629	-0.0201	-0.011	-0.015	-0.0212	-0.0229
Size quintile 3	-0.612***	-0.709***	-0.599***	-0.668***	-1.090***	-0.639***	-0.558***	-0.662***	-0.443***	-0.685***
	-0.00896	-0.0343	-0.00854	-0.0177	-0.049	-0.0184	-0.0106	-0.0144	-0.0216	-0.0222
Size quintile 4	-0.385***	-0.403***	-0.373***	-0.389***	-0.751***	-0.360***	-0.342***	-0.402***	-0.290***	-0.437***
	-0.00857	-0.0287	-0.00761	-0.0168	-0.0362	-0.0159	-0.0102	-0.0138	-0.0209	-0.0213
Foreign ownership	0.174***	0.129***	0.0974***	0.189***	0.292***	0.152***	0.0996***	0.145***	0.00383	0.334***
	-0.00693	-0.0229	-0.00607	-0.0135	-0.0349	-0.0173	-0.0122	-0.0106	-0.0182	-0.0142
Election	0.0198***	0.0176	0.0248***	0.0133	0.0185	0.0249	0.0269***	0.0255***	0.0523***	0.0313**
	-0.00561	-0.0222	-0.00571	-0.0106	-0.0383	-0.0161	-0.00678	-0.00857	-0.0125	-0.0137
Observations	100,811	8,802	90,987	25,205	8,718	16,771	100,438	54,138	46,524	22,324
R-squared	0.437	0.31	0.381	0.493	0.287	0.453	0.323	0.387	0.277	0.375

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Commission services

Table II.A3.6: Allocative efficiency and state ownership (dep. variable: sector allocative efficiency)

VARIABLES	(1) AE	(2) AE	(3) AE	(4) AE	(5) AE	(6) AE	(7) AE	(8) AE
SOE share	-0.189*** (0.0461)	-0.178*** (0.0455)	-0.181*** (0.0457)	-0.129*** (0.0468)	-0.229*** (0.0629)	-0.182*** (0.0455)	-0.178*** (0.0457)	-0.173*** (0.045)
I_BG	0.121 (0.0784)							
I_CZ		0.233 (0.153)						
I_HR			0.091 (0.102)					
I_HU				-0.284*** (0.076)				
I_PL					0.0769 (0.0657)			
I_RO						0.205** (0.104)		
I_SI							0.0298 (0.13)	
I_SK								-0.387*** (0.115)
crisis	0.0028 (0.00867)	0.00166 (0.00868)	0.00264 (0.00868)	0.00539 (0.0086)	0.00331 (0.0087)	0.00297 (0.00865)	0.00254 (0.00869)	0.00454 (0.00861)
Observations	499	499	499	499	499	499	499	499
R-squared	0.767	0.767	0.766	0.773	0.767	0.768	0.766	0.771
Standard errors in parentheses								
*** p<0.01, ** p<0.05, * p<0.1								
Source: commission services								

Part III

Selected country profiles

OVERVIEW

This part includes country fiches for a selected group of countries with different experiences in SOE performances and reform strategies. These countries are Croatia, Italy, Lithuania, the Netherlands, Portugal, Romania, Sweden, Slovenia and the United Kingdom.

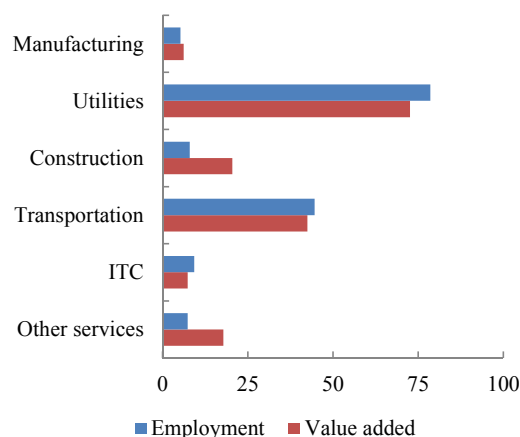
The country fiches have been divided into three main parts each. They start with a general background on the size, composition of SOEs in the economy and the main historical trends with regards to public ownership in each country. They then discuss the main issues and problems identified in each country with respect to the management and performance of SOEs. Finally, they present an overview of the reforms undertaken by governments, illustrating when possible their outcome and discussing the remaining challenges faced by each country.

1. CROATIA

1.1. BACKGROUND ⁽⁷⁷⁾

Croatia administers a large and diversified portfolio of public enterprises. The central government is a majority owner of 85 companies and owns minority stakes of more than 25% in a further 50 companies or so. The remaining, more than 600 companies identified as being under general government control are owned mostly by sub-central governments, at regional or municipal level. ⁽⁷⁸⁾ Of the majority-owned companies managed by the central government, 45 are classified as being either of ‘special state interest’ or ‘strategic’, with the distinction between the two categories being somewhat blurred. Strategic companies are, in principle, companies operating in sectors where the government performs a price setting function or considers it has strategic interest, and are therefore not envisaged to be privatised; they include road maintenance companies, part of the railways sector, various infrastructure companies but also firms engaged in the development of naval technologies and military trade. These companies may require considerable restructuring and/or recapitalisation. The portfolio of ‘special state interest’ companies is diverse and spans over many sectors of the economy, including the banking and insurance sector, sea transport, manufacture of food, chemicals and pharmaceuticals, mechanical engineering, provision of IT services and hotel management. About a third of the companies of strategic or special state interest are listed on the stock exchange.

Graph III.1.1: Share of SOEs by sector



Data represent average values for 2012 and 2013
Source: Commission services based on Orbis and Eurostat data.

The public corporate sector accounts for a sizeable share of the economy (Graph III.1.1). Beyond public services, the state's presence in the economy, measured in terms of its share in employment and value added, is pronounced in utilities and in the transportation sector but plays an important role also in the information and communication sector and construction. The biggest (in terms of employment) majority-owned public companies include Croatian Post, Croatian Forests, Railway Infrastructure, the national power utility company HEP and locally-owned transport and utility provider Zagreb Holding. According to the Commission services' estimates based on the Bureau van Dijk's ORBIS database, employment in companies under public control reached 12.7% of employment in the business economy in 2013. ⁽⁷⁹⁾ Adding companies in which the general government owns a higher than 25% share, the proportion would rise to 13.5%.

1.2. MAIN ISSUES IDENTIFIED

Despite recent improvements, public enterprises continue to pose fiscal risk. There are several companies in the general government sector that contribute negatively to the general

⁽⁷⁷⁾ The fiche reflects the situation of October 2015

⁽⁷⁸⁾ The set of companies under public control includes corporations classified in institutional sectors of public corporations (S11001), public deposit-taking corporations except the central bank (S12201) and companies classified in the general government sector (S13) active in sectors other than public services. Also included are all centrally-owned companies of strategic or special state interest with a higher than 50% public share and companies established by cities or regions identified based on ownership linkages reported in the Bureau van Dijk's ORBIS database.

⁽⁷⁹⁾ The business economy covers NACE sectors B-J, L-N and S95, i.e. it excludes agriculture, the financial sector and public services.

government deficits. Their net borrowing averaged to 0.6% of GDP in 2011-14. In the past years, public finances were also negatively affected by assumptions of SOEs' liabilities, recapitalisations and, most importantly, reclassifications of public corporations into the general government sector. While gradually improving, the weak financial performance of some major SOEs continues to pose fiscal risks going forward.

Public corporate debt is highly concentrated.

Non-financial public corporations tend to be more indebted than private companies. Controlling for size, the leverage ratio of public non-financial corporations was 40% higher compared with private companies, both when assessed relative to a company's ability to generate earnings and the amount of capital employed. Overall, these companies hold 21% of total non-financial corporate debt. The overwhelming majority of public companies' debt is concentrated in just two sectors: construction and utilities, and, in fact, only in a handful of companies. Although the overall riskiness of the debt exposure of public corporations appears somewhat lower compared with private enterprises, the high concentration of public corporate debt is a source of financial vulnerability.⁽⁸⁰⁾

Compared to privately owned peers, SOEs are markedly less efficient in deploying their resources.

Profitability of public corporations in terms of return on assets (ROA) and return on equity (ROE) is significantly lower than in private corporations. In 2014, controlling for size and the field of activity, the average amount of net income returned as a percentage of total assets was barely positive in public companies, compared with an average return of 4.5% in private enterprises, with little signs of improvement over time. The average proportion of labour costs in turnover decreased from nearly 40% in 2010 to 33% in 2014, it remained well above the 21% share recorded in private enterprises.

The wage-setting system in SOEs is inflexible and does not ensure alignment of workers' remuneration with the companies' economic

fundamentals.⁽⁸¹⁾ Empirical analysis using 2012 data show that in almost all branches of the economy, SOEs paid on average higher wages than the private sector, with peaks in construction (up to 50% more), trade and transportation. Controlling for workers' characteristics, a job in a SOE paid an average wage premium equal to 7% in 2012. Correspondingly, SOEs accounted for nearly 20% of total labour costs in the business economy. For centrally-managed SOEs, the rights of employees are regulated exclusively through individual in-house agreements, with little coordination on the part of the state as the ultimate owner. Existing collective agreements typically cannot be amended to adjust to economic conditions. However, agreements concluded in centrally owned companies are predominantly valid for a definite period of time and could therefore show a higher degree of adaptability compared with collective agreements at local level. In most cases, only one component for the calculation of the basic wage is determined by the collective agreement, leaving discretion in determining the amount of different material and non-material rights to the SOEs' management. The Ministry of Labour is exploring options to modify the collective bargaining framework while respecting the freedom of collective bargaining.

1.3. REFORM EFFORTS AND REMAINING CHALLENGES

The legal and institutional framework for the management of SOEs underwent far reaching changes in the past years.

Following a major overhaul in 2010, the system was reformed again in 2013 with the adoption of the Act on the Management and Disposal of State Assets. This law established the two existing ownership agencies: the State Office for State Assets Management (DUUDI), which is, together with the line ministries, responsible for the management of companies of strategic and special state interest, and the Restructuring and Sale Centre (CERP) in charge of managing other, mostly minority-owned companies. In the same year, the government published a strategy that set out important goals for the management of public assets in 2013-17, including the privatisation of the entire portfolio of

⁽⁸⁰⁾ The riskiness of the debt exposure is assessed as a proportion of debt held by companies with either high debt to capital ratios or high debt to earnings ratios. See the 2015 Country Report for Croatia, Box 2.4.1.

⁽⁸¹⁾ This paragraph draws on results presented in Bagić, D. (2014) and Nestić, D., I. Rubil and I. Tomic (2014).

non-strategic companies. The first complete register of centrally-owned SOEs and a register of managerial appointments were published in 2013 and 2014, respectively.

The Council's Country Specific Recommendations (CSRs) for Croatia issued in 2014 and 2015 concentrated on improving transparency and accountability of SOEs. The 2015 Country Report on Croatia highlighted two major issues: first, that the selection of SOEs managers does not ensure that SOEs are administered by boards with the requisite authority and competences to carry out their functions; and secondly, that accountability of SOEs' management is undermined by a lack of well-defined objectives. Addressing these issues is seen as a prerequisite to improving the financial performance of SOEs and mitigating the above-mentioned fiscal risks. The CSRs singled out a number of specific short-term steps, including the strengthening of the competence requirements in managerial appointments. Croatia was also recommended to advance the government's privatisation agenda. ⁽⁸²⁾

The 2015 National Reform Programme presented welcome steps towards improving the performance of SOEs in the long run. Work has been put in motion towards strengthening the selection of SOEs' management, improving the setting of company-specific objectives, benchmarking SOEs' performance and broadening the surveillance. Completing these projects in a timely manner and mindful of the best practices in other countries is therefore the immediate challenge. Fully implementing the government's agenda as regards minority-owned companies (see the last paragraph), improving the track record of completing larger privatisation projects and reinforcing the wage-setting framework will be the next important steps.

The government is taking steps to improve the performance of SOEs boards. A new framework for the selection of supervisory boards was adopted in August 2015, with a reform of management board nominations expected to follow in the second half of the year. The regulation strengthens the qualification requirements for applicants and puts candidates from the private sector on a more equal footing with the incumbents. Nevertheless, it is regrettable that the selection of board members will not benefit either from the expertise of professional recruiters or from a systematic use of advertisement to extend the pool of candidates.

Other important initiatives aim to improve the transparency of company-specific objectives and broaden the monitoring framework. Regarding transparent target-setting, the authorities are currently seeking technical assistance with a view to implementing a pilot project in selected companies. Furthermore, the authorities plan to strengthen reporting standards for companies owned at local or regional level, which have so far been left aside from the scope of the central monitoring framework.

Privatisation activities are developing slowly. In 2014, the government sold a minority package in a major public insurance company but other attempts to privatise strategic companies have been unsuccessful. Preparation of initial public offerings is in progress for Croatian Motorways and the national power utility company HEP. The Council has recommended advancing the listing efforts with a view to fostering compliance with higher corporate governance standards. Regarding the vast portfolio of minority shares (nearly 600 companies) administered by CERP, it was decided in 2013 that these companies would be sold or liquidated in two to three years – a target which will likely not be met.

⁽⁸²⁾ The 2014 Council recommendation: Present, by October 2014, a detailed plan for public property management for 2015. Ensure that companies under state control are governed in a transparent and accountable manner, in particular, strengthen the competency requirements for members of management and supervisory boards nominated by the State and introduce a public register for appointments. The 2015 recommendation: Increase transparency and accountability in the public corporate sector, in particular as regards managerial appointments and competency requirements. Advance the listing of minority packages of shares of public companies and privatisations.

2. ITALY

2.1. BACKGROUND ⁽⁸³⁾ ⁽⁸⁴⁾

SOEs owned by regional, provincial and municipal governments (local SOEs) are numerous and difficult to monitor. Istat reports that the total number of SOEs in activity (including those participated by the central government) was around 7,700 in 2013 (some 1.1% more than in 2012). Of those, around 6,000 are local SOEs (Istat 2015). Further some 1,500 are in liquidation or ceased entities. The association of Chambers of Commerce counts about 8,800 local SOEs. Local SOEs are estimated to employ some 500,000 persons, or 2.1% of total employment (Istat, 2015), a figure comparable to that reported by the OECD for the SOEs owned by the central government. Available data for about 4,200 SOEs (around half of the total) show a book value of equity of EUR 45 bn (2.8% of GDP). Almost 13% of local SOEs offer instrumental services to the public administration, while 23% provide local public services in network industries and 43% offer other services of general interest. More than one fifth of local SOEs (21%) offer goods or services with no public service obligation. While many local SOEs are small, some are large multi-utilities quoted on the stock market.

2.2. MAIN ISSUES IDENTIFIED

Around 35% of the local SOEs reported a loss in 2012. The quota born by public administrations is estimated at EUR 1.2 bn per year (0.07% of GDP). Of those losses, 25% are attributed to local SOEs that do not provide services of general interest. The percentage of loss-making SOEs was even higher before the crisis (39% in 2007) indicating that this is a structural feature, and not a cyclical one. Companies active in the northern regions display considerably better performance than those in the south, thereby confirming traditional regional disparities. Total transfers from the state are estimated at EUR 16.5 bn per year (1% of GDP - Commissario alla spesa, 2014b). Overall, it appears that owning bodies have not the

capacity to efficiently manage and control the local SOEs and/or that local SOEs are not profitable, although they often operate in absence of competition from other players in the market (see below).

There are other signs of inefficiencies: (i) many local SOEs seem to be empty boxes (at least 3,000 have less than 6 employees and in about half of local SOEs the number of directors is higher than the number of employees); (ii) 44% of municipal SOEs are (co-owned by municipalities of less than 30,000 inhabitants, suggesting that there could be important economies of scale to be reaped through consolidation; (iii) for a large number of local SOEs, the stake of the public shareholder appears too low for the purpose of defending the public interest (below 5% for approx. 1,400 local SOEs).

Customer satisfaction is low and prices rising relatively fast. Italian customers express lower satisfaction than customers in other countries with regard to the service they are provided with. The gap is driven by the much lower satisfaction for those services that are mostly provided by SOEs (e.g. postal services; gas, electricity and water; tram, local bus, metro and train services). ⁽⁸⁵⁾ Several indicators point out that, since late 1990s, prices of services generally provided by SOEs, particularly for waste, water and railway transportation, have increased faster in Italy than in France, Germany and the euro area as a whole. Furthermore, the prices regulated at the local level (another proxy of the prices of local SOEs) have increased faster than the general price index in the country. In particular, between 1999 and 2015, the price index of services regulated at the local level has increased by nearly 73% while the overall price index has increased by 36%. Even in the

⁽⁸³⁾ The analysis captures all entities where local governments, at the regional, provincial and municipal level, hold directly or indirectly a stake (local SOEs). It is based on European Commission (2016).

⁽⁸⁴⁾ The fiche reflects the situation of March 2016.

⁽⁸⁵⁾ Consumer Markets Scoreboard - Making markets work for consumers, 10th edition, June 2014. The performance of different markets is assessed on the basis of six main criteria: 1) the ease of comparing goods or services on offer; 2) consumers' trust in retailers/suppliers to comply with consumer protection rules; 3) problems experienced and the degree to which they have led to complaints; 4) consumer satisfaction (the extent to which markets live up to what consumers expect); 5) choice of retailers/providers; and 6) switching of tariffs/providers. The first four indicators are applicable to all the markets and feed into the 'Market Performance Indicator' (MPI) – a composite index serving as the basis for the main ranking of the 52 markets. The four components of the index are equally weighted and the score is on a scale from 0 to 100.

period from the beginning of the crisis to 2015, price index of services locally regulated soared by more than 32%, more than doubling the increase in the overall price index (14%) ⁽⁸⁶⁾.

The underlying drivers of low performance are multidimensional. First, state ownership in Italy at the level of local governments lacks a clear orientation. Local SOEs operate in a complicated legal framework resulted from various developments throughout the years replying short-sightedly to the needs of the moment. In Italy, a SOE is, in principle, an entity organized and operating under private law (incl. civil law, company law), as is the case with the ordinary commercial companies that are privately held. Nevertheless, several derogations and special provisions have been added by the Italian legislator to the said framework, in the view of the public interest attached to the operation of SOEs. A number of provisions introduced - but for various reasons never implemented in practice - further entangle the whole context. ⁽⁸⁷⁾ This creates legal uncertainty that hamper efficient management. Furthermore, political interventions are reportedly widespread having a negative impact on SOEs' economic performance (i.e. ROI and ROE), while positively affecting the level of employment at the firm level. ⁽⁸⁸⁾ Also, political interventions result in complex cross-ownership structures, making transparency and good management a challenge ⁽⁸⁹⁾. Finally, the local SOEs usually operate sheltered from competition, obtaining service contracts with no open tender, reportedly in breach of the Italian law.

⁽⁸⁶⁾ Three important caveats apply. Firstly, these indicators are only imperfect proxies of the price of services provided by SOEs. Secondly, given the data available, it is not possible to disentangle how much of Italy's positive inflation differential in those services was due to catch-up effect, i.e., to a lower-than-average initial level of the prices charged to consumer. For urban transport, the average ticket price in Roma, Milano, Torino in 2013 was EUR 1.5, still less than in Paris (EUR 1.7), Berlin (EUR 2.4) and London (EUR 2.5). Finally, the price increases could have helped to counterbalance the gradual reduction of transfers received from public administrations.

⁽⁸⁷⁾ See for example the Budget Law of 2008 (Law 244/2007, Art. 3, para 27 and following).

⁽⁸⁸⁾ Garrone, P., L. Grilli and X. Rousseau (2011); Menozzi A., M. Urtiaga and D. Vannoni (2011).

⁽⁸⁹⁾ See for instance, the web of SOEs in Lazio, as reconstructed in Perotti and Teoldi (2014): http://www.lavoce.info/wp-content/uploads/2014/03/Lazio_Partecipate_finale.jpg

2.3. REFORM EFFORTS AND OUTCOME

In August 2015 a comprehensive enabling law to reform public administration was adopted, including amongst others the reorganisation and rationalisation of state-owned enterprises and local public services.

In January 2016, the Council of Ministers adopted a draft legislative decree which endeavours to deal with the SOEs (both locally and centrally owned) in a systematic manner. It governs a wide range of issues relating to the establishment of SOEs and the acquisition or holding of shares in such companies and enshrines a number of overarching principles, namely: efficiency in the management of public assets, protection of competition including an express reference to the EU rules on state aid, and rationalisation of public expenditures. Amongst others, the draft framework sets the limits within which the use of SOEs is tenable (whether majority- or minority-owned), drawing from the concept of older initiatives such as the Budget Law of 2008: on the one hand, it is not allowed to establish and maintain SOEs unless necessary for the pursuit of the institutional goals of the public authority concerned; on the other hand, among those institutional goals, only the objectives specifically foreseen therein may justify the use of SOEs (e.g. the provision of services of general interest, the construction of public works etc.). The draft framework reaffirms that, without prejudice to the deviations established thereby, SOEs are subject to company law and thus it positions them on an equal footing with privately held companies. In that regard, it also explicitly submits SOEs to the bankruptcy laws. The decree is currently subject to the non-binding opinion of the Parliament.

A second legislative decree reviews the legislation for services of general economic interest, including in, but not limited to, network industries and local public transport. The decree provides the awaited clarity in the definition of the said services and the way they can be provided (i.e. by contractors selected following a public tender; mixed companies, where the private stakeholder is chosen through a public tender; or internally, including through a direct award to in-house entities). It requires a thorough survey of the market, including a consultation of

market stakeholders, before a new service is considered falling within this scope. It lays down specific requirements for the content of service contracts (e.g. in terms of the award duration, the definition of the public service obligation; and their compensation), envisages the aggregation of the services concerned also by means of a proper definition of the relevant geographical areas and reiterates the imperative to treat candidate suppliers equally, no matter whether they are publicly or privately owned. If in-house awardees are to be used, this decision is submitted to the opinion of the Competition authority. Furthermore, the role of sector regulators is strengthened. The waste sector is brought under the scope of the regulator for energy and water. As regards the local public transport, the role of the Transport Authority is reinforced and specific criteria are introduced in the regional distribution of the relevant national funds in order to reward the use of public tendering. The decree is currently subject to the non-binding opinion of the Parliament.

2.4. REMAINING CHALLENGES

How to reform the "archipelago" of the SOEs?

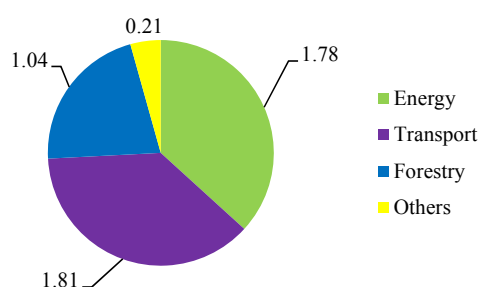
A manifold strategy is considered indispensable in the report of the spending review of August 2014 ("Programma di razionalizzazione delle partecipate locali"). The authorities have occasionally launched different policy initiatives; however no concrete results were achieved so far either due to lack of implementation or a limited scope of the interventions. To bring fruit a reform should strike the right balance between different principles (such as accountability and transparency vs. efficiency and corporate autonomy) and ultimately cater for budgetary savings. The most recent initiatives of January 2016, discussed above, represent a good opportunity to tackle the inefficiencies of the SOEs in a comprehensive way and strengthen competition in the interested sectors. If finally adopted and properly implemented, it may help in the consolidation of SOEs; streamline the regulatory disarray that gives rise to competitive advantages or disadvantages among SOEs and privately held companies; and ensure an effective monitoring, enforcement and sanction system.

3. LITHUANIA

3.1. BACKGROUND ⁽⁹⁰⁾

The state of Lithuania is an important shareholder or owner of roughly 160 enterprises engaged in economic activities with a combined asset value of roughly 20% of GDP, thereby controlling the largest share of commercial assets in the country. At the end of 2014, the calculated market value of state-owned enterprises amounted to EUR 4.8 bn, with transport and energy companies accounting for EUR 1.81 and EUR 1.78 bn, respectively (Graph III.3.1).

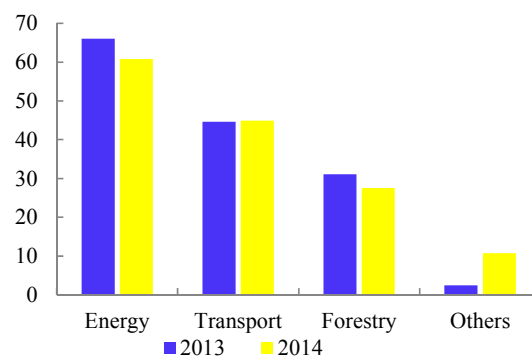
Graph III.3.1: SOE portfolio - estimated market value in billion EUR (2014)



Source: Governance Coordination Centre (Valdymo Koordinavimo Centras, VKC)

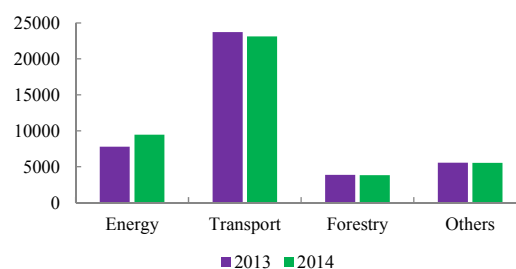
In 2014, normalised net profits ⁽⁹¹⁾ of the total SOE portfolio amounted to EUR 144 m declining slightly by 0.2% from 2013 (Graph III.3.2). Profits in the forestry sector dropped the most (i.e. -11.6%) followed by the energy sector (-7.9%). Profits in transport industries, however, grew modestly by 0.7%, while profits in all others sector combined skyrocketed by an impressive 337.0% (see graph below).

Graph III.3.2: SOE portfolio - normalised net profit in million EUR



Source: Valdymo Koordinavimo Centras (VKC)

Graph III.3.3: SOE employees



Source: Valdymo Koordinavimo Centras (VKC)

Table III.3.1: Key figures (2014)

Sales revenue	2 302	mil. EUR
Net profit	144	mil. EUR
Leverage (D/E)	22.9	%
ROE (last 12 mo.)	2.8	%
Employees	42	Thousand

Source: Valdymo Koordinavimo Centras (VKC)

In terms of employment in the SOE portfolio, transport companies represent the largest employer followed by energy companies with more than 23,000 and 9,000 employees in 2014, respectively (Graph III.3.3). Overall, total employment in SOEs increased by 2.4% in 2014 largely driven by a 21.1% increase in the energy sector.

Table III.3.1 above provides further key characteristics of the Lithuanian SOE portfolio including total sales revenue of roughly EUR 2.3

⁽⁹⁰⁾ The fiche reflects the situation of October 2015.

⁽⁹¹⁾ Normalised in this context means that unusual or one-time influences are removed (e.g. large capital gain stemming from the sale of land).

bn and a return-on-equity (ROE) ratio of 2.8, in 2014.

3.2. MAIN ISSUES IDENTIFIED

In 2010, Lithuania published the first overview of state-owned commercial assets. It revealed that performance results of most SOEs were poor and that their ROE in 2009 only reached 0.1%. This was much lower compared to SOEs in other European countries as well as the average ROE of enterprises in the private sector of Lithuania (around 9%).

Moreover, the overview identified several challenges in terms of SOE governance (relative to the OECD benchmark):

- No clear division between commercial activities and activities in the service of the public interest, and no clear and transparent reporting standards of key business figures.
- Insufficient operational autonomy of boards and executives (with the state often being involved in day-to-day management, thereby also undermining its monitoring and regulatory functions).
- Insufficient transparency in nominating and hiring CEOs, with candidates most often chosen by ministers and not clearly based on professional merits.

3.3. REFORM EFFORTS AND OUTCOME

As a consequence of Lithuania's poor SOE performance review the Lithuanian government decided to undertake a far-reaching reform of state-owned enterprises. In 2010, it adopted a reform strategy encompassing 140 entities.

The reform strategy includes the following objectives:

- Set clear performance targets (ROE that state-owned enterprises have to achieve, evaluating the ambitiousness of the enterprises' strategic goals, as well as monitoring the implementation of those goals).

- Separate commercial and non-commercial activities (to avoid hidden cross subsidies and to allow subsidies to support only public service obligations).

- Separate the ownership and regulatory functions (to ensure effective supervision and to avoid new entrants perceiving regulation as a means to distort competition).

- Increase the transparency of SOEs (preparing aggregated quarterly and annual reports, evaluating the financial results and efficiency of SOEs).

- Professionalise boards (organizing the process of nominating board members, creating a database of potential board members, evaluating the competencies of existing boards, directly participating in the boards of SOEs).

In 2010, the SOE reform commenced with the government approving new transparency guidelines, which set higher accountability standards for all state-owned enterprises (including new requirements on the boards oversight function, CEO certification of financial statements, etc.).

The government approved new ownership guidelines which included criteria for the nomination and appointment of CEOs, and for the assessment of management performance and also described the criteria for competence and independency of SOEs' boards.

Moreover, a governance coordination department was established in the State Property Fund. The department surveys the implementation of the reform objectives, and has a mandate for policy formulation initiatives (preparing methodological recommendations, initiating new laws, etc.), and for consulting the government and the ministries about SOE governance as well as consulting SOEs about their activities and the implementation of good governance practice.

The Commission also considered state-owned enterprise reform as an important challenge and a country-specific recommendation covering this area was issued by the Council in

2011-2014. In 2015, the Commission concluded that Lithuania made significant progress in implementing this reform, so that the CSR was dropped in 2015. In particular, Lithuania has separated the commercial and non-commercial activities, implemented regular reporting and performance targets, acted on the separation of ownership and regulatory functions and the ongoing professionalization of executive board members.

3.4. REMAINING CHALLENGES

Lithuania has made considerable progress, with the governance framework fully put in place. It remains, however, important that the latter is continuously applied and implemented. This will ensure further improving SOE performance towards the specified target of 5% ROE; avoiding cross subsidies between commercial and non-commercial activities or across SOEs and transparency of budgetary costs of public service obligations.

Maintaining the current reform momentum could help to achieve tangible results in terms of more independent directors on enterprise boards and faster progress toward return-on-equity targets. Moreover based on the experience made with SOE reforms, consideration could be given to implement similar ones to Municipality-owned enterprises, the latter which showed an equity value of roughly EUR 1.17 bn (end 2013), compared to EUR 5.49 bn for SOEs (end 2013).

Finalising the reform is of particular importance as SOEs would play a key role in carrying out future large infrastructure projects needed to upgrade the energy and transportation infrastructure which remains a high priority.

4. THE NETHERLANDS

4.1. BACKGROUND ⁽⁹²⁾

In 2013, the Dutch central government had stakes in 28 enterprises and additionally in five financial companies ⁽⁹³⁾ whose ownership was temporarily transferred to the Dutch State during the recent financial crisis. ⁽⁹⁴⁾ The government publishes regular notes on the state's participation policy that cover up to seven years. ⁽⁹⁵⁾ In those notes, the main policy lines are described with information on the current SOE situation and past/future policy actions.

Most Dutch state-owned enterprises are active in the financial, transport, energy and gambling sectors. In terms of total assets (in 2013), the largest enterprises with full state ownership are the central bank DNB (EUR 159 bn), Bank Nederlandse Gemeenten (EUR 131 bn), Prorail (in rail infrastructure, EUR 21 bn), Tennet (in the energy sector, EUR 12 bn), Gasunie (also in energy, EUR 11 bn), Nederlands Spoorwegen (in rail transport, EUR 6 bn), Amsterdam Schiphol Airport (EUR 6 bn) and EBN (in energy, EUR 6 bn). The government also has a minority stake (6%) in the airway carrier KLM. A few Dutch SOEs are active internationally and have foreign subsidiaries, such as Eneco or Tennet, both working in the energy sector. Provinces and municipalities hold stakes in (mostly regionally active) companies, such as local energy producers/distributors (e.g. Eneco) or local public transport operators (e.g. Gemeentelijk Vervoerbedrijf Amsterdam).

4.2. MAIN ISSUES IDENTIFIED

The Ministry of Finances (MoF) publishes an annual report with a number of key indicators to assess SOEs' financial performance. ⁽⁹⁶⁾ According to those figures, most SOEs operated with positive profit margins and returns on equity, paying out more than EUR 4.2 bn in dividends to the state in 2013. According to the report, only five SOEs made losses (€ 78 m in total) in 2013, of which €43 m can be attributed to the railway company NS, which had operated profitably in previous years (2008-2012).

The Dutch Court of Audit (Algemene Rekenkamer) regularly reviews the management and performance of Dutch SOEs, mainly based on the information reported by the MoF. ⁽⁹⁷⁾ In past reports, the Court of Audit came to the conclusion that information on SOEs is not sufficiently transparent for members of parliament. In its most recent publication on SOEs, the Court of Audit therefore lists the state's stakes and policy roles for each SOE. It further gives recommendations on how SOE administration could be improved; mainly advising the government to make the state's involvement more transparent and to provide evaluation tools to the public that allow assessing SOEs' risks as well.

In 2011-2012, the Senate carried out an extensive study on privatisation and agencification of central government services. ⁽⁹⁸⁾ This project included multiple analyses of different sectors as well as background studies and citizen surveys. The report concludes by giving a number of recommendations, for instance to enhance the role of the parliament by strengthening its role as legislator and controller; to create a broader perspective by reinforcing the relationship between citizens and the national administration; as well as to consider new instruments for steering privatised enterprises.

⁽⁹²⁾ The fiche reflects the situation of March 2016.

⁽⁹³⁾ In 2014, the central government had stakes in 32 enterprises. Two of those were sold in 2014. Two new SOEs were established in 2014: a regional development agency and an IT agency. Nevertheless, we focus on 2013 in the text, as this is the year for which the most recent financial information is available.

⁽⁹⁴⁾ Information on the SOE portfolio can be found here: <http://www.rijksoverheid.nl/onderwerpen/staatsdeelneming/en/portefeuille-staatsdeelnemingen>

⁽⁹⁵⁾ The most recent "Nota Deelnemingenbeleid Rijksoverheid" can be found here: <http://www.rijksoverheid.nl/documenten-en-publicaties/notas/2013/10/18/nota-deelnemingenbeleid-rijksoverheid-2013.html>

⁽⁹⁶⁾ The annual report 2013 can be found here: <http://www.rijksoverheid.nl/onderwerpen/staatsdeelneming/en/portefeuille-staatsdeelnemingen>.

⁽⁹⁷⁾ The most recent report is available here: http://www.courtofaudit.nl/english/Publications/Audits/Introductions/2015/04/The_State_as_Shareholder

⁽⁹⁸⁾ The report (in NL) and an executive summary (in EN) are available here: https://www.eerstekamer.nl/kamerstukdossier/verbinding_verbroken_onderzoek

Furthermore, in 2013, the government published a report of an interdepartmental policy research on SOEs⁽⁹⁹⁾, which mainly discussed theoretic models for SOE management and policy guidance.

4.3. REFORM EFFORTS AND REMAINING CHALLENGES

Starting in the late seventies and early eighties and until 2007, the Dutch government implemented a rigorous privatisation policy following the dominant lines of thought in supply side economics. It was felt that public objectives could be satisfied efficiently via private production of goods and services, with laws, regulations and contracts in place for safeguarding these objectives.⁽¹⁰⁰⁾ Other motivations were the downsizing of the public administration and controlling the government finances. Sometimes large companies were privatised in small steps; the post and telecom privatisation started in 1989 and ended more than 15 years later, in 2006, when the government sold its final shares. In December 2007, under the finance minister Wouter Bos, a change of policy took place. Public ownership was rehabilitated as an effective way of reaching public goals, in particular when those public objectives could otherwise not be achieved by private-owned companies.⁽¹⁰¹⁾ A topical example at that time was the idea of selling the government's share in Schiphol Airport. In the national public debate, it was questioned whether regulation alone allowed for ensuring that public objectives, such as business continuity in key transport facilities, were respected.

With the outbreak of the financial crisis, the public sentiment also turned in favour of SOEs and public control (including more control on the top incomes in the public sector). This is still the situation today, with two exceptions. In the

financial sector, it is standing policy to bring the financial institutions gradually back to the market as they have been restructured with stronger capital buffers and the climate on financial markets has also improved. In the gambling sector, e-gambling is being legalised by the current governing coalition; the market is opened and a privatisation of Holland Casino is announced for 2017.⁽¹⁰²⁾

⁽⁹⁹⁾ The report can be found here: <http://www.rijksoverheid.nl/documenten-en-publicaties/kamerstukken/2013/03/01/ibo-staatsdeelnemingen.html>

⁽¹⁰⁰⁾ See final conclusions of the report 'Publieke belangen en aandeelhouderschap' ('public objectives and shareholdership'), Eindrapportage 12 juli 2006, Kenniscentrum voor Ordeningsvraagstukken <https://zoek.officielebekendmakingen.nl/kst-28165-46.html>

⁽¹⁰¹⁾ See <http://www.rijksbegroting.nl/algemeen/gereferreed/1/1/3/ks-t113570.html>.

⁽¹⁰²⁾ See <http://www.rijksoverheid.nl/nieuws/2014/07/11/kabinet-moderniseert-kansspelbeleid.html>.

5. PORTUGAL

5.1. BACKGROUND ⁽¹⁰³⁾

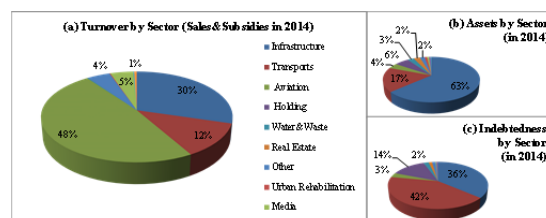
In the late 1980s, the Portuguese economy moved away from its corporatist post-revolution nationalisation and the country gained considerable experience with privatisation in several areas, namely the financial sector, telecoms, energy production and distribution (following the unbundling). Moreover, by the end of the century it had already transformed into corporations most of its SOEs and established a holding for the management of the state's assets ("Parpública" or "holding").

In 2014, the state business portfolio was comprised of 44 wholly or partly owned enterprises. Most of these companies are in the transport sector, including both infrastructure management related companies (rail, road, ports and air traffic) and companies actually operating the transportation fleets (bus, metro, ferryboat, train and airplanes).

SOEs owned by the central government in Portugal currently have a turnover of EUR 5 bn (approx. 3% of Portugal's GDP in 2014). Despite implementing much needed measures to improve operating income during the Economic Adjustment Programme (2011-2014), SOEs still post net losses on an aggregated basis (main exceptions are SOEs acting in the water; waste; ports; culture and media sectors).

Graph III.5.1 breaks down assets, turnover and indebtedness of central government SOEs by sector. It discloses the strong concentration of assets (85% of EUR 49 bn), turnover (90% of just over EUR 5 bn) and indebtedness (81% of EUR 30 bn, which is about 14.2% of GDP) in two areas: infrastructure management and transport services, the latter including the aviation company TAP (which is currently under a privatisation tender).

Graph III.5.1: Turnover, assets and indebtedness by sector (2014)



Source: Ministry of Finance; Commission services. Data for central government SOEs, excluding the holding company Parpública but not the companies it owns

SOEs from the several layers of public administration employed 166 961 workers by December 2014, which is about 3.7% of the total employment in Portugal and 0.5pp less than two years ago.

Even with a temporary increase of 6 000 employees ⁽¹⁰⁴⁾, SOEs' employment was reduced by -11.6% between 2012 and 2014. The employment downsizing was one of the features of the operating restructurings/reorganisations occurring in most central/regional/local level SOEs since 2011, when the country entered the Economic Adjustment Programme.

5.2. MAIN ISSUES IDENTIFIED

Portugal was on an Economic Adjustment Programme between May 2011 and June 2014. Since its inception the Programme's Memorandum of Understanding (MoU), in its fiscal, structural and financial sector sections, listed several measures regarding SOEs ⁽¹⁰⁵⁾, including specific targets for privatisations and the reorganisation and rationalisation of concrete sectors, including transport companies and transport infrastructure management SOEs as well as water and sewerage bulk services management.

⁽¹⁰⁴⁾ The BES resolution implied a shift from its employees to the bridge bank – Novo Banco – since September 2014. Until the bridge bank is sold those employees are considered within this analysis.

⁽¹⁰⁵⁾ Although this country profile does not expand on the financial SOEs, the MoU also listed measures in the financial sector like the sale or unwinding of the BPN bank (subject to a bail-out/ nationalisation in 2010). The streamlining of the state-owned CGD group to increase the capital base of its core banking arm was also foreseen.

⁽¹⁰³⁾ The fiche reflects the situation of October 2015.

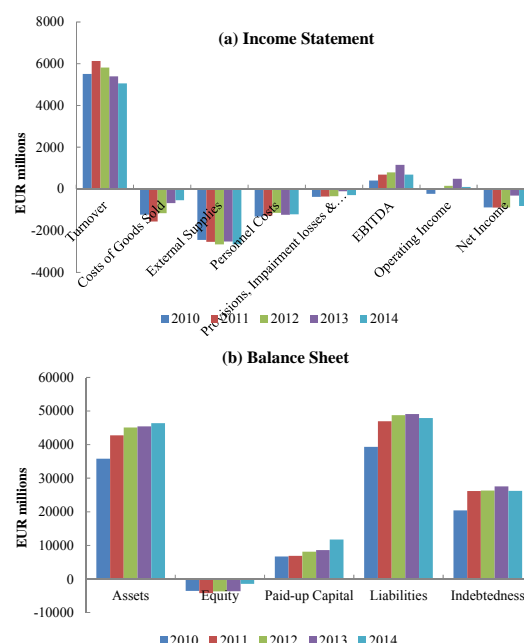
Measures have put emphasis on tackling the situation through institutional reforms to improve central government's public finance management tools and skills; on containing public expenditure; on limiting fiscal risks; and foster additional streams of cash flow for earlier public debt redemption. Strengthening the regulatory framework was also deemed crucial to improve the future sustainability and financial performance of SOEs while stimulating competition (and aligning incentives) wherever appropriate in order to best serve the citizen/user and bring about more competitiveness to firms operating in the country. In addition, renegotiation of road Public-Private Partnerships (PPPs) and ports' concessions was envisaged in view of delivering budget savings and freight cost reductions respectively.

5.3. REFORM EFFORTS AND OUTCOME

Financial situation 2010-2014

Despite important efforts made on cost-compression and revenues enhancing, severance payments stemming from the employment downsizing strategy were one of the reasons why EBITDA⁽¹⁰⁶⁾ did not improve further during 2010-2014 (Graph III.5.2). Additional pressure to the operating balance in central government SOEs came from the wage cut reversal imposed by the Constitutional Court ruling since 2013 (wage cuts to civil servants including SOEs' staff were introduced in January 2011, during the sovereign debt crisis that pushed Portugal into a bailout).

Graph III.5.2: Income statement and balance sheet of SOEs



Source: Ministry of Finance; Commission services. Data for central government SOEs, excluding the holding company Parpública but not the companies it owns

Looking at the overall picture, EBITDA improved considerably during the four year period. Nevertheless, 2014 was worse than the previous year, mainly due to a drop in the turnover, including also the decline in subsidies granted by the government. Reducing dependence on subsidies was one of the features of the SOEs' reform in view to ease the burden to the general budget from some historically loss making companies. Other items injuring EBITDA during 2014 and thus blurring the overall improvement made over the period were provisions, fair value reductions and impairment losses of both commercial debt and assets, also related with complex derivative contracts (exotic interest rate SWAPs) that are being contested in court.

Paid-up capital increased 75% between 2010 and 2014, mainly because of the recapitalisation strategy launched in the transport and infrastructure related sectors. Although still very negative, equity was 29% less negative by the end of the period analysed. The goal of limiting indebtedness levels was not achieved although it was reduced in 2014 after three years of

⁽¹⁰⁶⁾ EBITDA stands for earnings before interest, taxes, depreciations and amortisations.

indebtedness growth that contributed to a 38% increase for the whole period.

On the other hand, privatisation proceeds of about EUR 10 bn have clearly overachieved the target of EUR 5.5 bn set in the MoU ⁽¹⁰⁷⁾.

Public Financial Management

A new SOEs framework law ⁽¹⁰⁸⁾ was put in place encompassing a set of changes, including the Ministry of Finance's enhanced shareholder role. The new diploma also creates the technical unit UTAM, which provides technical support in all SOE related topics to the Minister of Finance. UTAM also monitors the performance of SOEs. At the same time, SOEs' indebtedness become subject to specified limits for long-term debt and risk derivative instruments, with the public debt agency (IGCP) playing a key monitoring role as well as managing their integrated cash position. This reform substantially improved the monitoring and reporting capacity on SOEs owned by the central government. Appointing the board of SOEs became under the scrutiny of an independent committee (CRE SAP), ensuring increased transparency, impartiality, accuracy and independence in the recruitment selection of candidates.

Concrete measures in the Transport sector

On the transport sector (including road and rail infrastructure operators), which was responsible for about 75% of the SOEs debt back in 2010, officials from the three Institutions monitoring the MoU invited the authorities to put forward a 5-years Strategic Plan for Transports ⁽¹⁰⁹⁾ to

rationalise the system and its SOEs. The plan envisaged improving SOEs' operating and financial performance, reducing their chronic deficits by better management and pricing systems while revising the services provided to ensure a better balance between different modes of transport, including wider use of railway and maritime transport and improved interconnections. The transport sector SOEs have improved their adjusted EBITDA ⁽¹¹⁰⁾ breaking even since 2013.

As legacy debt continued to weigh on the financial results of some transport SOEs, in 2013 the Government launched a comprehensive debt management programme to restore their financial sustainability. The State began assuming their short term debts at maturity, partially converting it into equity. Further equity injections and debt to equity conversions are expected to reach EUR 8.5 bn in 2013-2015 (about 5% of GDP). This operation entailed the reclassification of three companies within the general government, including the railway operator.

Concrete measures for a more market oriented railway sector were put forward, including new public service obligation agreements, the unbundling of freight railway terminals and subsequent privatisation (ongoing) of the loss making SOE that was competing as a freight operator in the market. By the end of the Adjustment Programme the authorities put forward a revised strategic plan for the sector, proposing further structural reforms and assessing the future investment needs from a user perspective in view to ensure the highest economic impact of any new investments to be deployed during the EU 2014-2020 programming period, mostly benefiting export companies.

The road and rail infrastructure operators were merged in view of seizing operating synergies as well as by sharing the financial model and public-private partnerships experience that will ultimately bring the new SOE into a combined and more sustainable financial situation.

⁽¹⁰⁷⁾ For further details on the implementation of the privatisations in the context of the Adjustment Programme for Portugal see box 2.2 of European Commission (2014 b) available at

http://ec.europa.eu/economy_finance/publications/occasional_paper/2014/op191_en.htm

⁽¹⁰⁸⁾ Decree-law 133/2013, 3rd October 2013

⁽¹⁰⁹⁾ The plan named "Plano Estratégico dos Transportes para o Horizonte 2011-2015" (October 2011; http://www.portugal.gov.pt/media/152472/pet_mobilidade_sustentavel_rcm.pdf) was revised in April 2014 further extending its time framework to 2020 ("Plano Estratégico dos Transportes e Infraestruturas, Horizonte 2014-2020" also called "PETI 3+"; June 2014 revised version available at <http://www.portugal.gov.pt/media/12289855/20150618-peti3-revisto-aac.pdf>)

⁽¹¹⁰⁾ Adjusted EBITDA means EBITDA excluding the severance payments resulting from the personnel downsizing foreseen in the rationalisation of those companies.

On the ports' sector, several regulatory changes took place to reduce freight costs. With the same goal in mind, the authorities gave away part of their revenues in the port authorities, which remain profitable SOEs, to reduce some of the costs eventually borne by port users. Port concessioners were demanded to contribute to the port's invoice reduction with a similar amount and thus a renegotiation on their longer term contracts began, headed by the sectoral regulatory body and each port authority.

Concrete measures in the Water sector

The water and sewerage sector went through operational restructuring, including by merging 19 companies majorly owned by the central government into just 6. This merge envisages the increase of operational efficiency; bring about investment rationalisation in these capital-intensive sector by ensuring the full-cost recovery of the services rendered; the application of the polluter-pay principle; and the sustainable management of natural resources, in line with EU directives. Regulatory changes including a strengthened regulatory body were implemented and are paramount to ensure that the new model is fully sustainable, improving the relationship between bulk service providers, retail service providers and the end-user. ⁽¹¹¹⁾

5.4. REMAINING CHALLENGES

Although the operating income of central government state-owned enterprises has improved markedly and the comprehensive debt strategy recently launched should restore their financial sustainability, the authorities still have some remaining challenges ahead:

- Ensure that road PPPs' renegotiations succeed and that savings stemming from it effectively crystallise in the budgets;
- Careful assessment of investment needs is necessary to ensure that new investments are

subject to a robust business case based on conservative and carefully assessed demand projections. Full financial needs must be comprehensively assessed in a clear way from the onset, avoiding the same problems that triggered the over-investment in road PPPs;

- Regulatory powers in several sectors could ensure that more private involvement does not jeopardise competition or service efficiency. In this sense, it is important to ensure the means for the new Transport Regulatory Authority to become fully operational. As the former SOEs for postal services, airport operation and waste management were fully privatised, it is important that those sectoral regulatory bodies monitor closely market players' behaviours and market developments;
- The tendering of bus and metro concessions in Lisbon and Porto were designed in view of eliminating any prevailing subsidies for rendering its services. Should these procedures fail, reorganisation plans for these SOEs could be put forward to contain losses and its negative impact on the general government budget;
- Despite also envisaged in the SOEs framework law, the monitoring and reporting on local SOEs by UTAM remains slightly delayed due to the prioritisation of work and clearing of issues related with the separation of tasks between central and local government.

⁽¹¹¹⁾ For further details on the design and implementation of the water and waste sector restructuring under the MoU see box 2.3 of European Commission (2013 c) available at

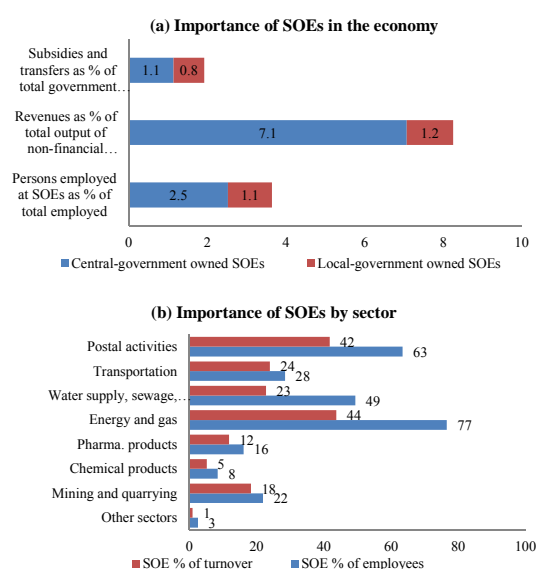
http://ec.europa.eu/economy_finance/publications/occasional_paper/2013/pdf/ocp153_en.pdf

6. ROMANIA

6.1. BACKGROUND ⁽¹¹²⁾

The absolute size of the portfolio of state-owned enterprises (SOEs) in Romania is markedly above average but not exceptional compared to other EU Member States (Graph III.6.1). Generating 8% of total output of non-financial corporations and employing close to 4% of the Romanian workforce, SOEs play an important role in the Romanian economy. Like in many other countries, they dominate in particular the energy and rail transport sectors, which provide crucial inputs to the overall economy.

Graph III.6.1: The importance of SOEs



Note: Central- and local-government owned SOEs combined. Other sectors comprises NACE R2 categories C (excl. C20 and C21), G, I, J, L, M, N, P and Q. The graph does not include NACE R2 categories A (108 SOEs), F (141 SOEs) and R (27 SOEs)

Source: Ministry of Public Finance 2013 data, Commission analysis

6.2. MAIN ISSUES IDENTIFIED

The main issues with state-owned enterprises can be divided into three main categories. Firstly, their operational performance is suboptimal compared to private-owned companies and their peers in neighbouring countries. Secondly, loss-making state-owned enterprises

represent a burden to the general government budget through tax arrears, contingent liabilities and state support to mitigate potential job losses through liquidation or restructuring. Thirdly, existing corporate governance rules are not fully adhered to and leave various areas uncovered ⁽¹¹³⁾.

A sound corporate governance framework is of utmost importance as the state ownership setup is dispersed over multiple line ministries and local governments. A centralised monitoring function is exercised by the Ministry of Public Finance, however in practice the responsible unit is not fully empowered and line ministries and local governments exercise the ownership function to their best judgement, including frequent interference in day-to-day management. The vision of the respective line minister matters greatly in increasing the operational performance of the companies in his or her portfolio or, on the contrary, in pushing SOEs towards non-core activities or disadvantageous endeavours.

6.3. REFORM EFFORTS AND OUTCOME

Corporate governance principles, as defined by the OECD in 2005, were incorporated in the Romanian legislation on commercial companies in 2006,⁽¹¹⁴⁾ and are also applicable to most SOEs as most are organised as commercial companies. Corporate governance rules specific to SOEs in Romania were introduced for the first time in November 2011 through the government emergency ordinance (GEO) 109/2011, with inputs from the IMF, the World Bank and the European Commission. The government emergency ordinance 109/2011 is already binding but will be amended and adopted by the Parliament,⁽¹¹⁵⁾ which provides an opportunity to improve its provisions and to reinforce implementation. The government prepared amendments to enhance

⁽¹¹³⁾For more details on the suboptimal operational performance and the burden to the general government report, see the European Commission (2015a) 272. at http://ec.europa.eu/europe2020/pdf/csr2015/cr2015_romania_en.pdf

⁽¹¹⁴⁾Law 441/2006 amending law 31/1990 on commercial companies and law 26/1990 on trade registry.

⁽¹¹⁵⁾Under Romanian legislation, government emergency ordinances enter into force as of government approval, but need to go through parliamentary approval afterwards to be converted into law.

⁽¹¹²⁾The fiche reflects the situation of March 2016.

transparency, compliance monitoring and enforcement. They were submitted to Parliament in January 2016 but have yet to be discussed.

The introduction of the corporate governance legislation for SOEs had a significant and positive impact in Romania. First of all, it put the complex topic of SOEs on the public agenda. The topic was studied in different reports and climbed up in economic programs of political parties. It is one of the priorities for the current, technocratic government. Improved transparency highlighted the harmful relationship between the political class and SOEs, the financial difficulties and the costs to society of financially supporting mismanaged companies. The reform momentum attracted well known private sector professionals to take up challenges of turning around state-owned enterprises. For several important SOEs the financial situation has improved over the last couple of years, and better corporate governance may be one contributing factor. The authorities published a comprehensive report by an independent consultant, assessing the implementation and challenges, and providing recommendations for a successful reform of SOEs, and recently announced the intention to accelerate the appointment of professional managers, as provided for under GEO 109/2001. ⁽¹¹⁶⁾

The existing framework provides a good start for reforming the SOE sector by depoliticizing and professionalizing boards, while increasing transparency and public accountability. The corporate governance legislation applies to all SOEs at central or local level, in which the state - directly or indirectly - owns 51%. The strong points of the Romanian corporate governance framework are (i) the applicability of company law on SOEs, (ii) the separation between the ownership and the regulatory function of the authorities, (iii) the transparent and professional selection of board members and management, (iv) the concept of performance monitoring, and (v) the strengthened protection of minority shareholders.

Regarding the selection of professional managers, both the board of directors or the line ministry or central level authority could open the procedure, once the mandate of the board expires. Thirty-three companies at central-government level, including the largest companies in the energy and transport sectors, have applied a transparent selection procedure in accordance with the legislation. The legislation requires that for large companies an independent external advisor is hired to run the selection process. Minimum half of the members of the boards have to be independent, i.e. they cannot be government representatives or civil servants. Once selected, the board of directors prepares and submits an administration plan for approval at the general shareholder meeting.

Despite the initial success, new boards were dismissed in 18 out of the 33 companies shortly after selection, and replaced by interim boards appointed by the line ministry or central level authority. As the law does not provide sanctions for not implementing the new selection procedure, the remaining, mainly smaller, over 200 companies under central administration have not observed the new legal framework. The law does not foresee a deadline for a company's shareholders to assess the board's administration plan and there is no requirement for justifying the rejection of the plan. However, such rejection results in the dismissal of the board of directors. As a result, such abusive dismissals have already taken place. This situation highlighted the need to further reform the selection and the firing procedures and to limit the duration of interim boards.

The protection of minority shareholders was enhanced by the introduction of the cumulative voting rights. Therefore, similar to rules for listed companies, any minority shareholder possessing more than 10% of the voting rights may demand the cumulative voting method to be used to appoint board members. Transparency was enhanced through requirements for companies, public authority and Ministry of Public Finance (for SOEs at central level) or Ministry of Regional Development (for companies at local level) to prepare and publish yearly reports concerning economic activity, strategies and outcome.

⁽¹¹⁶⁾ Assessment of the implementation of the EO 109/2011. Report was commissioned by the Government of Romania with the support of the European Union, the IMF and the World Bank, that aimed at providing an independent assessment on the status of the implementation of Government Emergency Ordinance 109/2011 <http://www.mfinante.ro/guvernanta.html?pagina=domenii>

6.4. REMAINING CHALLENGES

The remaining challenges are tackled in the draft legislation to improve the current framework, except for the remuneration policy which will be included in a separate, subsequent secondary legislation.

Points for possible improvement of the current framework include (i) the implementation of selection and appointment procedures of board members and management as envisaged in the legislation, as well as their dismissal, (ii) the frequent interference by line ministries in the functioning of SOEs, (iii) disclosure of key information to the general public, (iv) annual budgeting process, including the dividend pay-off policy; (v) MOPF's oversight role; (vi) the treatment of public service obligations provided by SOEs, (vii) definition of the roles and responsibilities of the shareholders, board and managers, including mandate contracts and administration / management plans; (viii) sanctions for not implementing the corporate governance reform and (ix) the remuneration policy.

To improve the selection procedure, the new draft requires a separate selection process for executive and non-executive board members. As responsibilities are different for executives and non-executives, it was considered that skilled candidates targeting executive positions may be discouraged by the joint selection process, waiting afterwards for the board of administration to vote for appointing the CEO. To avoid abusive dismissal of boards and to clarify responsibilities of stakeholders and the role of the administration plan, the draft envisages that the process starts with a letter of expectations from the owner, based on which the board of administration drafts the administration plan, which should be negotiated with the owner. Main targets of the administration plan will be added to the mandate contract to be signed by the owner with selected board members. Also, to avoid abusive dismissal it was proposed to include broad criteria and definition of cause for revocation. Sanctions for public supervisory bodies that are not implementing the corporate governance legislation have been added, and the level of current sanctions has been increased. In addition to these sanctions, the ministry of public finance will monitor, evaluate, and publicly report on the performance of supervisory bodies in

complying with the corporate governance legislation.

Transparency and accountability will be further enhanced through the legal requirement to make key information available to the general public on the companies' website. This will include the annual financial report; the annual audit report; the composition of the board and management structures; related parties transactions information; and the remuneration policy. While the current legislation solely requires making such information available to shareholders, most large companies already publish their annual financial statements on their website.

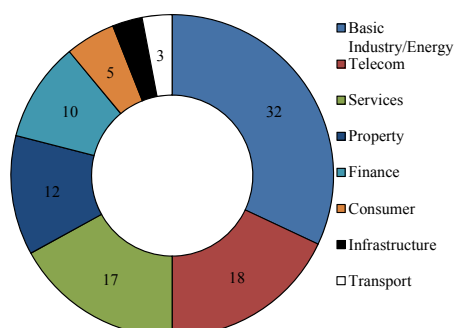
The remuneration policy will be revised based on best practices, after the implementation of the corporate governance reform. The remuneration set by the reform in 2011 for members of the boards (including CEO) consisted of a fixed and a variable component, linked with targets, but no ceilings. As in the private sector, the salary of the CEO was set by the board of administration, while for the members of the board and members of the supervisory board it was established through shareholder meeting decision. Later on, the fixed remuneration was capped for executive board members to 6 times the average salary in the respective sector, over the last 12 months, while variable remuneration was set according to market practice in Romania or in the EU. Non-executive board members received a fixed remuneration at the level of the average monthly salary in the industry and a variable component based on market practice in Romania or in the EU. Remuneration of the state representatives in the general shareholder meeting was significantly increased, way beyond their duties and legal responsibilities.

7. SWEDEN

7.1. BACKGROUND ⁽¹¹⁷⁾ AND MAIN ISSUES IDENTIFIED

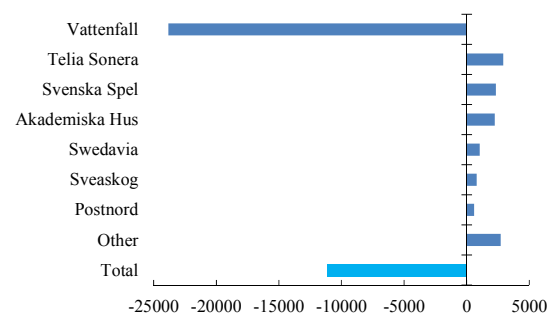
SOEs owned by central government in Sweden represented a value of SEK 460 bn (approx. 12% of Sweden's GDP) and generated SEK 16.5 bn profit in 2014. The state business portfolio contains 49 wholly or partly owned enterprises, two of which are listed on the stock exchange. These enterprises employ approximately 163,000 people (approx. 3.5% of the total employment). The basic industry/energy and telecom sectors are the most important state-owned sectors representing 32% and 18% respectively of the value of SOEs in Sweden in 2014 (Graph III.7.1). Despite the significant loss recorded by Vattenfall (energy sector) in 2013 and 2014, and the challenges faced by LKAB (minerals and mining sector), the Swedish SOEs distributed SEK 18.1 bn of dividends in 2014. However, in 2015 net profits turned into substantial losses, with the interim report recording a loss of 11.2 bn SEK for the first half of the year (Graph III.7.2). This is largely explained by the major write downs (roughly SEK 40 bn) of the energy group Vattenfall linked to nuclear power in Sweden and slumping lignite activity in Germany. LKAB also wrote down assets approximating SEK 7 bn and recorded an overall loss in 2015. None of these companies will distribute any dividends this year.

Graph III.7.1: Valuation of SOE portfolio by sector in 2014 (%)



Source: Swedish Ministry of Finance, 2016

Graph III.7.2: Net profit of SOEs with most significant impact on earnings, Jan-June 2015 (billion SEK)



Source: Swedish Ministry of Finance, 2016

The main objective for SOEs of the current Swedish government is for them to create value and ensure that their public service functions are fulfilled. In line with the Social Democrat-Green Party government priorities, SOEs are expected to put more emphasis on environmental sustainability. The previous 2006-2014 government's policies were geared towards divesting from companies operating in commercial markets with well-functioning competition. As a result, a privatisation effort was made totalling SEK 160 bn between 2007 and 2013 (Table III.7.1). No divestments were made in 2014 or 2015. These divestments also meant a reduction of the fiscal revenues generated by dividends from SEK 31.3 bn (0.8% of GDP) in 2007 to SEK 18.1 bn (0.5% of GDP) in 2014.

Table III.7.1: Divestments and dividends of state-owned companies (2007-2013)

Divestments				Total Dividends	
SEK bn	Year	Income	Share in the company, %	Year	SEK bn
TeliaSonera	2007	18	8	2007	31,3
OMX	2008	2.1	6.6	2008	23,2
Vin&Sprit	2008	57.7	100	2009	20,8
Vasakronan	2008	24.6	100	2010	37,6
Nordea	2011	19	6.3	2011	27,8
Arbetslivsresurs	2011	0.1	100	2012	26,7
Vectura	2013	0.9	100	2013	17,7
Nordea	2013	19.5	6.4	2014	18,1
Nordea	2013	21.6	7	Total	203,2

Source: Swedish Ministry of Finance, 2016

In addition to the SOEs owned by the central government, regional and the municipal governments also own a substantial share of public companies. In 2014, there were 119

⁽¹¹⁷⁾ The fiche reflects the situation of March 2016.

enterprises that were owned by county councils, with somewhat over 22,000 employees whereof 80% were active in the education, health care and care sectors. On the municipal level, the number of enterprises has increased significantly since the beginning of the 1990s, from roughly 1,300 to roughly 1,750 enterprises. These are mainly active in the fields of real estate management (municipally owned housing companies), electricity and water supply and transport and communication. These enterprises had a bit more than 48,000 employees in 2014, a total turnover of SEK 185 bn (roughly 5% of GDP) and a profit of SEK 12 bn (0.3% of GDP).

7.2. REFORM EFFORTS AND OUTCOME

The first reforms and steps towards privatisation and deregulation were taken already during the 1980s in Sweden, targeting the then state-run transportation and electricity monopolies and aiming at improving efficiency. This gained momentum with the 1992 privatisation bill, which resulted in a plan to privatize 34 SOEs. The first sectors to be opened up for competition were therefore nationally bound aviation (initiated in 1992 and completed in 1996), the railway freight market (in 1996) and the electricity market (initiated in 1996 and finalised in 1999). Other sectors benefitting from far-reaching early reforms were telecommunications (initiated in 1993) and the postal services (1990-94), in the process of which the state has divested substantial holdings.⁽¹¹⁸⁾

The latest decade has seen continued reforms; through privatisation of SOEs and further deregulation. For instance the pharmacy monopoly was dismantled in 2009-12, the preschool and child care sector were deregulated as from 2006 and the care and healthcare sector

started to be opened up as from 2010, when also the vehicle inspection monopoly was abolished.

Several institutional reforms relating to the governance of SOEs have also been undertaken in Sweden since 2007⁽¹¹⁹⁾. In the area of transparency and disclosure, the government adopted new guidelines regarding the external reporting by SOEs in November 2007. The guidelines stipulate that the external reporting of the SOEs, which includes the annual report, interim reports, the corporate government report, the statement on internal control and the sustainability report, should be as transparent as in listed companies. The board should describe in the annual report the ways the guidelines have been applied during the past financial year and comment on any deviations. Moreover, the board is responsible for submitting a sustainability report. It should be published on the respective company's website along with the publication of the company's annual report.

Steps have been taken to enhance the functioning of SOE boards. In April 2009, Sweden issued new guidelines regarding the terms of employment for senior executives of SOEs. According to the guidelines, the remuneration of the CEO is the responsibility of the board as a whole. The board should also ensure that the remuneration of both the CEO and other senior executives remain within the guidelines decided upon by the annual general meeting. In case of any deviation from the government's guidelines, the board is expected to report on the special reasons with respect to any particular case.

A legal act passed in 2010 giving the Competition Authority the possibility to take municipalities to court in case of unlawful competition in order to clarify the situations under which municipalities may set up and run enterprises without competing with the private sector on unequal terms.

7.3. REMAINING CHALLENGES

While several publicly owned companies are placed in competitive markets, there are no signs that this has led to market distortions. The

⁽¹¹⁸⁾For example, Televerket was a Swedish government agency acting as an SOE responsible for telecommunications between 1853-1993, until its corporatisation in 1992-1993. It was then renamed Telia and in 2000 the company underwent a partial privatisation when almost 30 percent of the state's Telia shares were sold on the Stockholm Stock Exchange. While Sweden was among the first European countries to deregulate its telecom market, the Swedish state is still, now together with the Finnish state, the largest shareholders in what is now TeliaSonera through the merger of Telia and Sonera in 2002.

⁽¹¹⁹⁾OECD (2010).

governance reforms over the past years have contributed to this as well as the recent improved mandate of the competition authority with respect to legal action against possible market distortions.

However, on the regional and local level, there are signs of a tendency in the opposite direction, i.e. towards an increasing number of publicly owned enterprises. Professional management of these can often be a challenge as appointments of board members and senior executives are frequently done at the political level, potentially resulting in suboptimal skill sets and experience. Transparency as regards the objectives and disclosure is often far from satisfactory and close ties between the political decision-makers and the senior executives create risks linked to corruption and crowding out of private actors. Continued vigilance with respect to the prevention of possible market distortions by SOEs will remain an important challenge. This is particularly important vis-à-vis the role of municipality-owned housing companies. Their increased importance might lead to further distortionary effects in the housing market, which is already suffering from an undersupply of housing and limited competition in the construction sector.

Recent developments in several specific SOEs such as Vattenfall, SAS, Telia Sonera and LKAB, have sparked a debate on the rationale for continued state ownership and the governance of SOEs. With respect to the latter, the management of SOEs could be considered to become more independent, safeguarding well-defined strategic interests without direct political influence.

8. SLOVENIA

8.1. BACKGROUND ⁽¹²⁰⁾ ⁽¹²¹⁾

The level of state involvement in Slovenia is amongst the highest in Europe. According to OECD data, the book value of equity of majority-SOEs and minority-SOEs ⁽¹²²⁾ relative to GDP is the highest in Europe for majority state-owned companies (over 50%) or the second highest if minority stakes are also included (between 10% and 50%). In addition, the share of SOEs in terms of employment is the third highest in both cases. According to the OECD Public Ownership Index ⁽¹²³⁾ the extent to which the state owns, controls, or is involved in business in Slovenia is above the average in the EU and in the Central and Eastern European (CEE) peer countries, particularly in the network industries (electricity, gas, rail, transport, air transport, postal services and telecommunications). An important feature of state ownership in Slovenia is that majority-SOEs/minority-SOEs presence is strong also in other sectors where state involvement is less pronounced in peer countries (such as consumer staples, chemical industry, manufacturing, tourism and leisure) and particularly in the banking sector, which creates inter-linkages among financially-troubled majority-SOEs/minority-SOEs and state-owned banks with increasing non-performing loans (NPLs) and amplify the risks for public finances.

State ownership in Slovenia is concentrated in a complex network of directly and indirectly state-owned or state controlled banks, non-financial corporations (NFCs) in various sectors, insurance companies and investment funds which continue to weigh on the economy. The state is the largest employer, asset manager and corporate debt holder in Slovenia. Although only about 1% of the total number of companies in Slovenia (642 companies at the end of 2014) were identified as majority-SOEs or minority-SOEs, they are highly significant companies from an economic perspective. They account for one third

of the assets, a quarter of the value added, over 40% of the equity value and one third of the financial debt obligations of NFCs. In addition, the state has prevalent ownership in the banking sector (over 50% of total banking assets) and it manages 88% of the pension assets and 60% of all insurance liabilities. Furthermore, one third of the workforce in Slovenia is employed either in the public sector (21% of total workforce) or in the state-owned and state-controlled NFCs, banks and other financial institutions (12% of total workforce).

The state control in Slovenia is exercised in several ways – direct through the a centralised state management fund (Slovenian Sovereign Holding); quasi-directly through the municipalities or the other state management funds (e.g. the pension fund KAD); and indirectly through the BAMC, the banks, the insurance companies, other financial companies, other majority-SOEs/minority-SOEs and their subsidiaries which are all fully and directly owned by the Republic of Slovenia.

8.2. MAIN ISSUES IDENTIFIED

Poor financial performance

Majority-SOEs/minority-SOEs in Slovenia have been highly indebted since the onset of the crisis (their debt leverage ratio ⁽¹²⁴⁾ is higher than the average for all corporates) both relative to private and foreign owned peers in Slovenia, and to majority-SOEs/minority-SOEs in other CEE countries. This is evident in almost all sectors apart from the chemical and pharmaceutical sectors, where private owned Slovenian companies appear to be more indebted.

Compared to their peers in other CEE countries and to privately owned companies in Slovenia, majority-SOEs/minority-SOEs are less profitable, less efficient in deploying their resources (capital employed) and less productive (based on total factor productivity

⁽¹²⁰⁾ The main sources used for this Country profile are European Commission (2016 a), European Commission (2015b), European Commission (2013 c).

⁽¹²¹⁾ The fiche reflects the situation of March 2016.

⁽¹²²⁾ For the purpose of this country profile minority-SOEs are defined as companies in which the state has at least a controlling minority ownership of (25%+1).

⁽¹²³⁾ See Section I.1.3

⁽¹²⁴⁾ The (debt) leverage ratio represents the level of debt relative to a company's cash flow capacity. It is calculated as the total financial debt net of cash and cash equivalents on the balance sheet divided by the earnings before interest, tax, depreciation and amortisation (EBITDA). Companies are defined as highly indebted if their leverage ratio exceeds 5 - a commonly accepted credit risk threshold for NFCs.

estimations)⁽¹²⁵⁾. In 2013, profitability of majority-SOEs/minority-SOEs in terms of return on equity (ROE) and return on capital employed (ROCE) was lower than that of their privately owned peers (both domestic and foreign-owned). Relative to majority-SOEs/minority-SOEs in most other CEE countries, Slovenian majority-SOEs/minority-SOEs also underperform on the basis of industry-level comparison in all sectors. In addition, labour productivity of majority-SOEs/minority-SOEs seems to be lower than among domestic and foreign privately owned peers in most sectors, while the cost of labour per head is either higher or similar, which indicates lower efficiency and competitiveness of majority-SOEs/minority-SOEs.

Soft budget constraints and distorted resource allocation

A large part of the profitability of SOEs is supported by soft budget constraints in the form of subsidies, which is a source of moral hazard at management level and may adversely distort decision-making in companies, particularly decisions related to investment. In the period 2007-2013 the inflow of subsidies to the corporate sector amounted to approximately EUR 400 m per annum. In several sectors, such as agriculture, mining, public utilities, media, public administration, education and health, the proportion of subsidies is greater than 20 % of operating profits (EBITDA).

Soft budget constraints combined with a limited strategic and financial management capacity have distorted resource allocation and negatively affected the profitability of SOEs. In line with the higher debt leverage, capital expenditure at SOEs was higher than at all corporates relative to both operating profit and sales. This should have translated into higher profitability of SOEs compared to all corporates. Instead, available financing has been channelled to unproductive investments – i.e. less profitable (or loss-making) non-core activities as evidenced by the higher proportion of non-core assets on the balance sheet of SOEs compared to private peers.

Therefore, many SOEs remain at risk of default and have required (or may require in the future)

⁽¹²⁵⁾ See Chapter II.2 for more details on methodology.

state aid to avoid insolvency. Particularly exposed have been companies in the mining, apparel and wood production, some manufacturing companies, real estate, financial services⁽¹²⁶⁾ sector as their operating profit has been negative for a prolonged period of time.

Fiscal and economic implications

The state involvement in the economy has incurred significant fiscal and economic implications, estimated at over EUR 13 bn or just over one third of 2013 GDP for the period 2007-2014, out of which EUR 8 bn contributed directly to the increase in the consolidated government debt. While a large part of this was due to state interventions related to the rehabilitation of the banking sector (44% of total and 16% of GDP) as well as other equity increases and subsidies in troubled companies, a considerable amount was also associated with wider economic implications in terms of foregone profits of SOEs compared to their private peers (38% of total and 14% of GDP).

Slovenia's gross consolidated government debt almost quadrupled from EUR 7.9 bn in 2007 to EUR 30.3 bn at the end of 2014 (from 22.7% to 82.2% in terms of GDP). More than one third of this increase (EUR 8 bn or 21 percentage points) was due to costs related to SOEs and state-owned banks, such as capital injections, debt forgiveness, drawn guarantees, and the financing costs for the Slovenian bad bank (BAMC) established to enable the transfer and management of NPLs out of banks' balance sheets. Government deficit was also negatively impacted, particularly by the recapitalisations of the state-owned and state-controlled banks during the crisis.

8.3. REFORM EFFORTS AND OUTCOME

Higher level of state ownership relative to other countries, inefficient management and poor financial performance of SOEs, as well as their strong inter-linkages with the financial sector were identified as some of the key sources of the

⁽¹²⁶⁾ The financial services sector does not include banks and insurance companies but only other financial services such as investment funds and leasing companies. This category also includes most of the financial holdings which invested in companies using high leverage (debt) and low proportion of own equity.

excessive macroeconomic imbalances in Slovenia. As a result, a number of detailed recommendations were issued for Slovenia in three consecutive years (2013-2015), which covered several elements: (1) consolidation of ownership and management of state assets with the view to divest non-core assets, (2) ensuring professional management of core assets (including international expertise where needed), (3) making the Slovenian Sovereign Holding (SSH), a centralised unit for the management of state assets, operational and adopting a comprehensive long-term strategy and a clear classification of assets for divestment, (4) improving corporate governance in state owned enterprises.

Slovenia has made progress in addressing these recommendations. Important transformation processes regarding corporate governance have been completed. In the past, the direct state ownership was managed by various interchangeable asset management companies (this task was lastly granted temporarily to SOD, the state restitution fund, following the dissolution of the Capital Assets Management Agency, AUKN, in 2012) and other state funds (KAD - the state pension fund, PDP - the state fund for distressed assets, and DSU - the former development corporation). Following the Country Specific Recommendations, in 2014 SOD was upgraded to the Slovenian Sovereign Holding (SSH), a centralised state entity, with the aim of managing all state assets under one structure (with certain exceptions), and allowing for the privatisation of some of these assets. The SSH is now fully operational.

In parallel, a new corporate governance code was adopted in December 2014 in order to improve transparency and the management of state assets. The new framework is in line with the basic recommendations of international practice. Contrary to its predecessors, the new code eliminates loopholes that would allow privileged or otherwise differentiated treatment of majority-SOEs/minority-SOEs in comparison with privately held companies.

Progress has been made also concerning the divestment of non-core assets, particularly in the banking sector where the second largest state bank was recently sold to a private investor. A list of fifteen companies was compiled

already in 2013 for a first cycle of early privatisations. The sales process has been on-going and nine out of these companies have already been privatised (as of February 2016), amongst which Airport Ljubljana and NKBM (the second largest bank) were the most important transactions. The sales process for another significant asset on the list, Telecom Slovenije - the largest telecom and the sole owner of the telecommunication network in Slovenia, has repeatedly been subject to delays and was finally stopped in August 2015 partially due to prolonged political debates around the viability of the sale.

A long-term strategy for the management of state assets was adopted with in July 2015.

Overall, this strategy confirms the extent of state's current involvement in the economy, with the focus shifting from divesting non-core assets towards improving the corporate governance and performance of companies kept in state ownership. The strategy focuses on directly owned state assets only. Therefore, a clear insight into the overall state portfolio is missing and the complex inter-linkages of majority-SOEs/minority-SOEs and the financial system are not addressed, despite the fact that they continue to represent a key structural challenge in the Slovenian economy. The choice of criteria to classify state assets shows the state's interest for entire value chains. The classification of assets defines all important and large companies as strategic or important (86% of the state portfolio in terms of book value), which means that they are either not eligible for divestment or are eligible only for partial divestment. The potential new commitments to fully privatise – beyond the 2013 list of companies - are limited (EUR 119 m or 1% of the total book value of the state portfolio). Furthermore, a blocking minority by the state and a possible restriction on ownership concentration by private investors could make most of the important assets, including the largest Slovenian bank NLB, de-facto strategic. The strategy sets the overall profitability target of the state portfolio at 8 % by 2020 and intermediate targets of 5.9 % in 2015, 6.3 % in 2016 and 7.1 % in 2017.

A set of performance criteria for SOEs and an annual management plan for 2016 were adopted in late 2015 to match the profitability targets set by the strategy. Those criteria include a number of common economic and non-economic indicators for all SOEs in accordance with their

classification, which are quantified on an annual basis. The credibility of the profitability targets set for majority-SOEs/minority-SOEs cannot be assessed at this stage since, apart from the confidentiality of certain information relevant to performance indicators, it is not clear how these could be achieved and what the concrete consequences of missing the intermediate targets are.

8.4. REMAINING CHALLENGES

The remaining challenges of state ownership in Slovenia are mainly linked to the implementation of policies already adopted, including the proposed divestment of non-core assets and the sound management and enhanced corporate governance policies. The government has committed to a possible revision of the strategy after the first year and this may address any shortcomings noted and help to tackle any challenges that arise in practice. Other general economic implications, such as the impact of state ownership on growth, internationalisation and competitiveness of companies active in liberalised markets, could also be factored in when reconsidering the state ownership policy. A coherent system for the management of ownership oversight, potentially covering all state assets, is indispensable to ensure the separation of the government's ownership and regulatory functions and the professional management of SOEs.

9. UNITED KINGDOM

9.1. BACKGROUND ⁽¹²⁷⁾ AND MAIN ISSUES IDENTIFIED

Following significant privatisation efforts in the 1980s and 1990s, formal state ownership of enterprises became limited in the United Kingdom. Yet, regulation has grown in importance as a way for the state to exercise control. The two main kinds of state involvement are provision of public services and state shareholdings in diverse companies. Regarding public services, the National Health Service (NHS) and the British Broadcasting Corporation (BBC) are primarily publicly funded. There are also a few state-owned companies that are active in the railway sector. The largest is Network rail, which manages rail infrastructure in Great Britain. The other ones are Direct Rail Services, which serves the nuclear fuels industry, and three small local rail operators. The energy sector was completely privatised. However, energy companies are required to pursue public policy objectives such as security of supply and environmental sustainability.

The public shareholdings are managed by two government bodies: the Shareholder Executive (ShEx) and UK Financial Investments (UKFI). While ShEx used to be part of the Department for Business, Innovation & Skills, in April 2016 both entities will become a division of UK Government Investments (UKGI), a new government company owned by HM Treasury. As of 2015, ShEx oversaw 23 companies owned or partly-owned by the state. They operated in sectors as diverse as international development, media, public records, financing schemes, nuclear, skills and air traffic. UKFI was set up in the aftermath of the financial crisis, to manage shareholdings in the banks that were rescued by the government. The government has shares in Lloyds and Royal Bank of Scotland (RBS), and full ownership of NRAM and Bradford & Bingley. The latter two banks are effectively dissolved and UKFI facilitates "the orderly management of the closed mortgage books of both".

Finally, local and devolved government involvement in enterprises is mainly in local

transport and airports. Waste and recycling collections are contracted out by local councils.

9.2. REFORM EFFORTS AND OUTCOME

A large majority of state-owned enterprises in the United Kingdom were privatised between 1979 and 1997 under successive Conservative governments. In response to the prolonged economic crisis of the 1970s, the United Kingdom government started to privatise profitable entities with a view to raising revenues and thereby reducing public-sector debt. In the 1980s, the focus shifted to privatising core utilities in the belief that that privatisation would make them more efficient and productive. A further retrenchment of state ownership took place in the 1990s.

As a result, the SOEs' share of gross value added gradually dropped from 10.9% in 1979 to 4% in 1990 and 2.2% in 1997. It is estimated that, as a result of the privatisations, one million employees moved from the public to the private sector. The employment share represented by SOEs decreased from 7.2% in 1979 to less than 1% in 1997. Privatisations are still ongoing. In 2015 the government sold half of its 30% of the residual shareholding in Royal Mail, after an initial public offering in 2013.

In some cases the government kept a golden share in privatised entities. This can entail, for example, the ability to prevent hostile takeovers – potentially to restrict foreign influence in strategic sectors. However, golden shares could pose challenges under EU law. In the case of the London airports, for example, the United Kingdom government cancelled their 'special share' to ensure compliance with a judgment of the Court of Justice of the European Union.

To achieve socially desirable objectives, and overcome the principal-agent problem, some privatised companies are subject to scrutiny by regulators. For instance, Network Rail Limited is regulated by the Office of Rail and Road. Other key regulators are the Office of Gas and Electricity Markets (Ofgem), the Office of Communications, the Water Services Regulation Authority, and the Financial Conduct Authority. These bodies set standards, promote competition and ensure

⁽¹²⁷⁾ The fiche reflects the situation of March 2016.

consumer protection. Regulators are usually funded by the respective industries (rail, gas and energy, telecoms, water supply, banking) rather than from general taxation.

9.3. REMAINING CHALLENGES

The two main challenges for the United Kingdom seem to be: (i) ensuring effective regulation of the privatised entities which have public service objectives; and (ii) further divestiture of government holdings in other companies.

Regulators play a particularly important role in the United Kingdom because of the high degree of private ownership in naturally monopolistic markets such as utilities. This puts additional emphasis on ensuring consumer protection. In line with the philosophy behind earlier divestitures, the government plans to continue the sale of non-core businesses. This includes the shares in Lloyds and RBS, and in the uranium enrichment group Urenco. The latter is a profitable company. The disposal of the bank shares will be influenced by market conditions.

REFERENCES

- Aharoni, Y. (2000), "The Performance of State-Owned Enterprises". Cambridge University Press 2000. In the Rise and Fall of SOE in the Western World.
- Amatori, F. (2000), "Beyond State and Market: Italy's Futile Search for a Third Way", Cambridge University Press 2000. In the Rise and Fall of SOE in the Western World.
- Bagić, D. (2014), "Analysis of the Impact of Collective Agreements on the Wage System in the Republic of Croatia", University of Zagreb
- Bel, G., X. Fageda, and M.E. Warner (2010), "Is Private Production of Public Services Cheaper than Public Production? A Meta-Regression Analysis of Solid Waste and Water Services". *Journal of Policy Analysis and Management*, 29(3), 553-557.
- Boardman, A. and A. Vining (1989), "Ownership and Performance in Competitive Environments: a Comparison, of the performances of Private, Mixed and State-Owned Enterprises". *Journal of Law and Economics* 17(1), 497-508.
- Boone, J. (2008), "A new way to measure competition". *The Economic Journal* 118 (August), 1245-1261.
- Carreras, A., X. Tafunell and E. Torres (2000), "The Rise and Decline of Spanish SOEs". in: The Rise and Fall of SOE in the Western World. Cambridge University Press, 2000.
- Carvalho, P., R. Marques, and S. Berg (2012) "A Meta-Regression Analysis of Benchmarking Studies on Water Utilities Market Structure", *Utilities Policy* 21(C), 40-49.
- Cavaliere, A., and S. Scabrosetti (2008), "Privatization and Efficiency: From Principals and Agents to Political Economy". *Journal of Economic Surveys* 22(4), 685-710.
- Chadeau, E. (2000), "The Rise and Decline of State-Owned Industry in Twentieth Century France". in: The Rise and Fall of SOE in the Western World. Cambridge University Press 2000.
- Chang, H. (2007), "State-Owned Enterprise Reform". United Nations, Department for Economic and Social Affairs. New York, June 2007.
- Christiansen, H. (2011), "The Size and Composition of the SOE Sector in OECD Countries". OECD Corporate Governance Working Papers, No. 5
- Christiansen, H. (2013), "Balancing Commercial and Non-Commercial Priorities of State-Owned Enterprises", OECD Corporate Governance Working Papers, No. 6.
- Cló, S., Ferraris, M. and Florio, M. (2015), "Public Enterprises in a Global Perspective in the last decade", Departmental working paper 2015-03, Department of Economics, Management and Quantitative Methods, University of Milan.
- Davids, M. and J. Van Zanden (2000), "A Reluctant State and Its Enterprises: State-Owned Enterprises in the Netherlands in the long Twentieth Century", in: The Rise and Fall of SOE in the Western World. Cambridge University Press 2000.
- Dewenter, K. and P. Malatesta (2001), "State-owned and Privately-Owned Firms: an empirical analysis of Profitability, Leverage and Labour Intensity". *The American Economic Review*. 91(1), 320-334.
- Domberger, S. and J. Piggott (1994), "Privatization Policies and Public Enterprise: a Survey" in: Privatization and Economic Performance. Oxford University Press, 1994,

Estrin, S., J. Hanousek, E. Kocenda, and J. Svejnar (2009): "The Effects of Privatization and Ownership in Transition Economies". *Journal of Economic Literature* 47(3), 699-728.

European Commission (2012), Commission Staff Working Document: "Guidance Paper on state aid-compliant financing, restructuring and privatisation of State-owned enterprises", SWD (2012) 14 final.

European Commission (2013), "Market Functioning in Network Industries - Electronic Communications, Energy and Transport". Occasional Paper, 129/2013.

European Commission (2013a), "The Economic Adjustment Programme for Portugal", Seventh Review, Occasional Paper 153/2013.

European Commission (2013 b): "Product Market Review 2013: Financing the Real Economy", European Economy 8/2013.

European Commission (2013 c): "Slovenia: State-Owned and State-Controlled Enterprises", Vol. 10, issue 3, June 2013.

European Commission (2014), "Market Functioning in Network Industries - Electronic Communications, Energy and Transport", Occasional Paper 204/2014.

European Commission (2014 a), "Electricity Tariff Deficit: Temporary or Permanent problem in the EU?", Economic Paper 534, October 2014.

European Commission (2014 b), "The Economic Adjustment Programme for Portugal - Eleventh Review", Occasional Paper 191, April 2014.

European Commission (2015), "State-owned enterprises in Member States", ECFIN paper prepared for a thematic review in the Economic Policy Committee.

European Commission (2015a), Country Report for Romania, COM (2015) 272 final.

European Commission (2015b), Country Report for Slovenia, SWD (2015) 43 final.

European Commission (2016), "Local State-Owned Enterprise in Italy: Inefficiencies and Ways Forward", European Economy, Economic Brief, 10/2016.

European Commission (2016 a), "Country Report for Slovenia, SWD (2016) 92 final.

Florio, M. (2004), "The Great Divestiture: Evaluating the Welfare Impact of the British Privatizations 1979-1997", MIT Press 2004.

Florio, M. (2013), "Network Industries and Social Welfare", Oxford University Press 2013.

Galambos, L. (2000), "State-Owned Enterprises in a Hostile Environment: the US experience", in: *The Rise and Fall of SOE in the Western World*. Cambridge University Press, 2000.

Garrone, P., L. Grilli and X. Rousseau (2011). "Utility municipali: influenza politica o discrezionalità del management?", *L'Industria*, a. XXXII, n. 1, pp. 69-91

Haskel, J. and S. Szymanski (1994), "Privatization and the Labour Market: Facts, Theory, Evidence", in: *Privatization and Economic Performance*. Oxford University Press, 1994,.

- Ito, M., P. Correa, S. Radas, and B. Skrinjaric (2014): "Stylized Facts on Productivity Growth: Evidence From Firm-Level Data in Croatia", World Bank Policy Research Working Paper no. 6990.
- Isaac, E., G. Gallais-Hamonno, Z. Liu, and R. Lutter (1994): "Productivity Growth and Firm Ownership: An Analytical and Empirical Investigation", *Journal of Political Economy* 102(5), 1006-1038.
- Karayalcin, C. and M. Ulubasoglu (2005), "State-Owned Enterprises and Redistribution: An Empirical Analysis", Florida International University, Department of Economics, 07/2005.
- Kaufmann, D., A. Kraay, and M. Mastruzzi (2010). "The Worldwide Governance Indicators: Methodology and Analytical Issues", World Bank Policy Research Working Paper No. 5430.
- Kim J. and H. Chung (2008), "Empirical Study on the Performance of State-Owned Enterprises and the Privatizing Pressure: The Case of Korea". <http://www.regulation.upf.edu/utrecht-08-papers/jkim.pdf>
- Levinsohn, J., and A. Petrin (2003). "Estimating Production Functions Using Inputs to Control for Unobservables", *Review of Economic Studies*. 70(2), 317-342.
- Meggison, W.L., and J.M. Netter (2001). "From State to Market: A Survey of Empirical Studies on Privatization", *Journal of Economic Literature* 39(2), 321-389.
- Menozzi A., M. Urtiaga and D. Vannoni (2011), "Board composition, political connections, and performance in state-owned enterprises, *Industrial and Corporate Change*", pp. 1-28
- Millward, R. (2000), "State Enterprise in Britain in the Twentieth Century", in: *The Rise and Fall of SOE in the Western World*. Cambridge University Press, 2000.
- Nestic, D., I. Rubil and I. Tomic (2014): "An Analysis of Wage Level and Wage Structure in Croatia", Institute of Economics, Zagreb.
- Newbery, D. (1999), "Privatization, Restructuring and Regulation of Network Utilities", Massachusetts Institute of Technology, 1999.
- OECD (2011), "State-Owned Enterprise Governance Reform: An Inventory of Recent Change".
- OECD (2014), "The Size and Sectoral Distribution of SOEs in OECD and Partner Countries".
- OCED (2015), "Guidelines on Corporate Governance of State-Owned Enterprises".
- Olley, G.S., and A. Pakes (1996). "The Dynamics of Productivity in the Telecommunications Equipment Industry", *Econometrica*, 64(6), 1263-1297.
- Reinert, E. (2000), "The Role of the State in Economic Growth", in: *The Rise and Fall of SOE in the Western World*. Cambridge University Press, 2000.
- Shirley, M., and P. Walsh (2000), "Public versus Private Ownership: The Current State of the Debate", World Bank Policy Research Working Paper, no. 2420.
- Stiefel, D. (2000), "Fifty Years of State-Owned Industry in Austria", in: *The Rise and Fall of SOE in the Western World*. Cambridge University Press, 2000.
- Toninelli, P.A. (2000), "The Rise and Fall of Public Enterprise: the Framework", in: *The Rise and Fall of SOE in the Western World*. Cambridge University Press, 2000.

Vining, A. and A. Boardman, M. Moore (2014), "The Theory and Evidence Pertaining to Local Government Mixed Enterprises". *Annals of Public and Cooperative Economics* 58(1), 53-86.

Wengenroth, U. (2000), "The Rise and Fall of SOEs in Germany", in: *The Rise and Fall of SOE in the Western World*. Cambridge University Press, 2000.

World Bank (1995), "Bureaucrats in Business – the Economics and Politics of Government Ownership", New York, Oxford University Press.