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Working Group on Privatisation and Corporate Governance of State Owned Assets

The Role of State-Owned Enterprises in the Economy:

An Initial Review of the Evidence

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THE ROLE OF STATE-OWNED ENTERPRISES IN THE WORLD ECONOMY: AN INITIAL REVIEW OF THE EVIDENCE

1. Purpose and Content of This Report

1. This purpose of this report is to provide an initial stocktaking of available information on the economic importance of SOEs. It serves as background information to the project on state-owned enterprises in the world economy that the Working Group decided to embark upon as part of its 2009-2010 Work Programme.

2. As outlined in the programme of work, the project will be developed along two main streams. The first is to develop a functional typology (or common language) concerning state owned enterprises. This will facilitate data gathering and comparative analysis. The second stream is to map and analyse the role and economic impact of state owned enterprises in the economy at large. This will include issues of economic efficiency, SOE reform and corporate governance issues related to cross border operations. Based on this report and their national experiences, delegates may want to provide the Secretariat with additional guidance on how to advance these two aspects of the exercise. Building on this discussion, the Secretariat will develop a questionnaire and provide the Working Group with a first outline of the final report when it meets in April, 2009.

3. For OECD countries, this report limits itself to reviewing information that is already available, including from the Working Group's own report from 2005 (OECD, 2005) and the Economic Policy Committee's regular questionnaire based score-boarding of the size and scope of SOEs (Conway et al., 2005). For each of the BRIC countries a short fact finding study was commissioned from local consultants by the Secretariat. Each consultant was asked to make full use of national data sources to describe the weight of SOEs in the economy, identify changes during recent decades, the sector distribution of SOEs, the importance of listed SOEs and, to the extent possible, the pattern of internationalisation of SOE operations. Two of the consultant reports have been made available to the Working Group, in an edited and slightly shortened version, as room documents [DAF/CG/PRIV/RD(2008)15 and DAF/CG/PRIV/RD(2008)16]. Delegates are invited to consider their de-restriction.

4. The paper is organised as follows. Section 2 summarises the main empirical information that can be drawn from the subsequent five sections. Section 3 takes stock of available information about SOEs in the OECD countries. Sections 4 through 7 synthesises information about SOEs in the economies of China, Russia, Brazil and India based on the consultant reports.

2. Overview and summary

5. Two observations that immediately offer themselves from sections 3 to 7 are, first, the scarcity of overall economic information on SOEs in many countries and, second, the multitude of definitions of SOE that render cross-country comparisons very difficult. On the first point, the countries whose governments have long since divested themselves of most corporate entities are, perhaps unsurprisingly, the least likely to collect aggregate SOE data. Conversely, countries where SOEs still or until recently are a main driving force in the economy (e.g. China, India and to a lesser extent Russia) publish at least some macroeconomic time series with the SOE sector as one of the sub-components.

6. Partly related to the previous point, the definition of "SOE" is a serious headache. In the absence of macroeconomic data most OECD countries collect SOE data for administrative rather than statistical purposes, hence applying narrow definitions implicitly established by national budget laws or the reach of state ownership agencies. From an analytical viewpoint this is problematic because it means that neither SOEs held at the sub-national levels nor unincorporated entities (according to national accounts definitions, "quasi-corporations") are normally included.

7. In some cases it also means that enterprises with a government ownership of less than 50 per cent is excluded, whereas the Secretariat (including when preparing the present paper) normally considers an ownership above 10 per cent as significant enough to qualify the enterprise as SOE. An interesting half-way position is created by Russian official statistics which allow the identification of such "mixed enterprises" only if the private partners are Russian nationals, and which also excludes subsidiaries of SOEs. The arguably best statistical coverage of SOEs is available for India, which includes not only a full coverage of the central government and state levels, but also applies a very broad definition that includes as SOEs government departments, trusts and other autonomous bodies involved in business activities.

8. The lack of systematic data for many highly industrialised countries is regrettable, since the economic weight of SOEs in these economies, especially within certain sectors, can be substantial. According to the estimates made in the following sections, SOEs account for just under a third of the Chinese and Russian economies; between 10 and 20 per cent of the Indian economy; just under 10 per cent of the Brazilian economy; and just under 5 per cent of the average OECD economy (Table 1). Without exception the figures have fallen over the last 10-15 years. The strongest declines were seen in Russia where the share of SOEs in the economy has more than halved, though admittedly from a very high starting point. In the case of China, the decline of SOEs as share of GDP may reflect statistics rather than realities on the ground: official Chinese statistics count as SOEs only companies with total state ownership, so the recent wave of IPOs of profitable SOEs in China will in itself have lowered the estimate.

9. Moreover, from the viewpoint of the international economy it is less clear that the SOE sectors of a number of countries have lost in importance. For example, if China's SOEs have indeed gone from 38 per cent (in 1998) to 30 per cent (in 2006) of a GDP that grows by 10 per cent in p.a. then it implies that the SOE sector's value added in absolute terms has almost doubled over the period. Similarly, the growth rates in the Indian economy since 1994 have been so high that the decline in SOE share from 18 to 13 per cent actually means that the value added of India's SOEs' is now around 70 per cent higher than at the beginning of the period.

10. There are additional reasons why the actual economic weight of SOEs may be understated by the GDP and employment estimates in Table 1. SOEs are not (or no longer) spread thinly across the economy – they tend to be concentrated in a few "strategic" industries of great importance to a number of other sectors. The largest concentration of SOEs is found in public utilities, telecommunication and – mostly outside the OECD area – in the banking and hydrocarbons sectors. The OECD Indicators of Product Market Regulation estimates the average government ownership of fixed-line telephone companies in OECD countries to around 40 per cent[1]. Among the publicly listed telecom companies in OECD countries (including now mobile telephony) around one fourth are SOEs.

[1] This is, however, based on an indicator that differs qualitatively from most of the data employed in this paper: the PMR Indicators measure the government ownership share of the largest individual operator in each sector.

Table 1. Estimated weight of SOEs in the national economy

	Share of SOEs in GDP (or other relevant economic indicator)		Share of SOEs in employment	
	Latest estimate	Ten years ago	Latest estimate	Ten years ago
OECD area			5% (2003)[2]	
Brazil[3]	7% (2003)	10% (1995)		
China	>30% (2006)	>38% (1998)	34% (2006)	57% (1998)
India	13% (2007)	18% (1994)	22% (2007)	24% (1994)
Russia[4]	<30% (2004-7)	<65% (1994-5)	39% (2007)	66% (1995)

Source: Secretariat estimates based on OECD (2005) and various consultant reports cited in the following sections.

11. Most non-OECD countries do not publish sector specific breakdowns of SOEs' economic activity beyond the industrial sector. However, whatever little data are available confirms the predominance of state ownership in the said sectors. In India, SOEs owned by the various levels of governments currently account for 68 per cent of GDP in the utilities sector and 39 per cent of transport and communication (which includes telecommunication and railways). In Brazil the federal and state authorities still account for 37 per cent of the assets of the banking sector. And, not least, in non-OECD countries the economic weight of the SOE sectors is greatly boosted by a few huge oil and gas companies. Petro China, PetroBras and Gazprom top the SOE league tables of China, Brazil and Russia respectively.

12. Another source of importance of SOEs beyond their share in total output is the fact that they feature disproportionately among publicly listed companies in many countries. Table 2 shows that, whereas listed SOEs' share of market capitalisation remains relatively modest (below 7 per cent) in OECD countries it remains very large in transition and emerging economies. In Brazil and India SOEs account for about one fourth of the national stock markets – a share that has declined in recent years, and strongly so in the case of Brazil.

[2] Unweighted average of the country responses in OECD (2005).

[3] Based on SOEs' share of gross capital formation. This could arguably underestimate their weight in GDP if, for example, cash-strapped SOEs had invested less than private enterprises and households.

[4] The indicator of economic weight is a composite indicator based on SOEs' share of capital formation in the institutionalised economy (not including general government and residential investment) and SOEs' share of industrial production. Both measures would overstate the SOE share as SOEs are concentrated in these sectors. The indicators in the table have therefore been adjusted downward by approximately 10 percentage points.

Table 2. Estimated weight of SOEs in the national economy

	Share of listed SOEs in stock market capitalisation		Largest listed SOE	
	Latest estimate	5-10 years ago	Company	Market value (US$ billion) [5]
OECD area	7% (2008)[6]		EDF Group	171
Brazil	25% (2008)	79% (1995) [7]	PetroBras	237
China	83% (2007)	69% (1999)	Petro China	546
India	23% (2008)	32% (1997)	Oil and Natural Gas Corp.	51
Russia	48% (2008)	31% (2004)	Gazprom	307

Source: Secretariat estimates based Forbes 2000 and various consultant reports cited in the following sections.

13. In Russia, the weight of SOEs is stock market capitalisation increased significantly in recent years, from 31 per cent in 2004 to almost half in April 2008. This reflects, first, the acquisition of additional state shares in certain "strategic" companies; secondly, a valuation effect from the price of oil to the value of SOEs involved in oil and gas exploration (which has been reversed since April 2008); and the effect of recent partial privatisation of a couple of large SOEs. The latter explanation has also been massively at play in China, where the government has as its stated policy that commercially viable SOEs should seek stock market listing. No less than 83 per cent of the market capitalisation of Chinese stock markets is accounted for by SOEs, and of the current top-10 individual companies only two (China Petroleum & Chemical; China Merchants Bank) were already listed five years ago.

3. SOEs in OECD countries

3.1 A snapshot in 2003

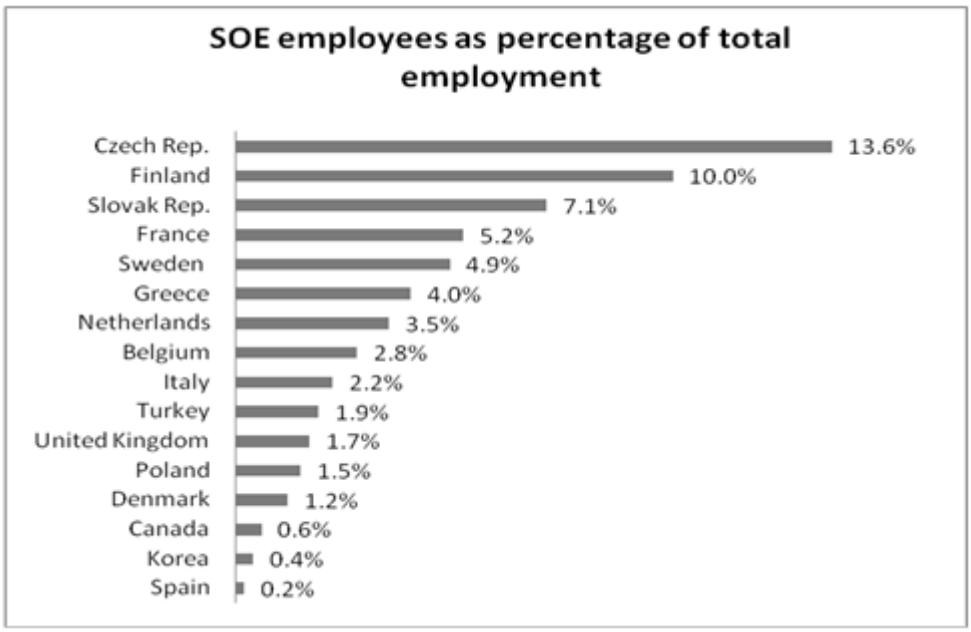
14. The most recent attempt at a stocktaking of SOEs' weight in OECD countries' economies was part of the Working Group's publication *Corporate Governance of State-Owned Enterprises* (OECD, 2005). However, as statistical documentation was not the primary objective of this publication the data that were collected at the time were, at best, cursory. The best indications of SOEs' importance in the sense of the present paper can be derived from member countries' estimates of SOE employment as per cent of economy-wide employment. These data, which are available for 16 OECD countries, are reproduced in Figure 1.

[5] As of 2 April 2008.

[6] Approximated by the share of SOEs in the top 500 listed enterprises. This is probably a high-end estimate as listed SOEs tend to be larger than average.

[7] The 1995 figure is based on the weight of SOEs in the Ibovespa tracking index.

Figure 1. SOE employees as percentage of total employment



Source: OECD (2005).

15. From Figure 1 it appears that the share of the total national payroll in OECD countries that was employed in SOEs in 2003 varied from near-zero to 13 per cent. This would lend itself to the assumption that SOEs' share of the respective economies may also be found within this interval. However, the figures need to be interpreted with extreme caution. For instance, it is not clear that all respondents to the 2003 questionnaire applied the same – or even comparable – definitions of SOEs. It seems counterintuitive that Poland's share of SOE employment is less than a fifth of the similar figures for the Czech Republic. Also, countries like Korea and Spain which retain significant public utilities under government control have apparently applied a narrow definition of SOEs for them to have arrived at an employment share beneath 0.5 per cent.

16. OECD (2005) also attempted a comparison of SOEs' value-added as share of national GDP, but the data reported by member countries were even scarcer. Such data as was obtained confirmed the story of the employment figures, with some of the transition economies at the top of the "league table" with SOE shares of GDP around 10-15 per cent[8].

3.2 Government ownership in selected sectors

17. Another important source of information on the economic importance of SOEs in OECD countries is provided by the Indictors of Product Market Regulation (PMR) that OECD Economics Department calculates as part of its work for the Economic Policy Committee. The purpose of the Indicators is creating an aggregate, as well as disaggregated, scoreboard(s) of the various aspects of product and service market competition that governments have it within their powers do change. One such aspect is the direct state ownership of productive activities. PMR Indicators rank market openness on a

[8] Actually, OECD (2005) attributed by far the largest SOE share of GDP to Finland, but this seems to reflect a statistical peculiarity: the Finnish value-added figures included foreign production by partly state-owned large multinational companies.

scale from 0 to 6, where 0 means virtually unregulated (or, perhaps more correctly, uninfluenced by government) and 6 indicates a totally government-controlled activity. The methodology employed is summarised in Box 1.

Box 1. Data drawn from OECD regulatory databases: Methodology

Aggregate indicator of public ownership (PMR)

The indicators are scoreboards on a scale from 0 to 6, indicating the share of SOEs in the national economy. The lowest degree of government involvement, scored at 0, indicates that SOEs account for "less than 1%" of the economy. The highest, scored at 6, indicates that they account for "more than 30%".

The classification and the data are based on Gwartney and Lawson (1997)[9], which concerned SOE activity in 1995. Subsequent data were constructed mostly based on the Privatisation Barometer and other sources of privatisation data. For each year privatisation as per cent of GDP was subtracted from the estimate of SOE share of the economy for the previous year.

Sectoral indicators of public ownership (NMR)

Estimates of government ownership of enterprises in the service sectors rely on questionnaire responses from OECD member countries. Countries are normally asked to indicate the percentage of state ownership in the largest enterprise in each sector. In some cases a composite indicator is constructed as a un-weighted average of government ownership in several subsectors (e.g. the passenger transport and freight segments of the rail transport sector). The indicators are measured as per cent state ownership.

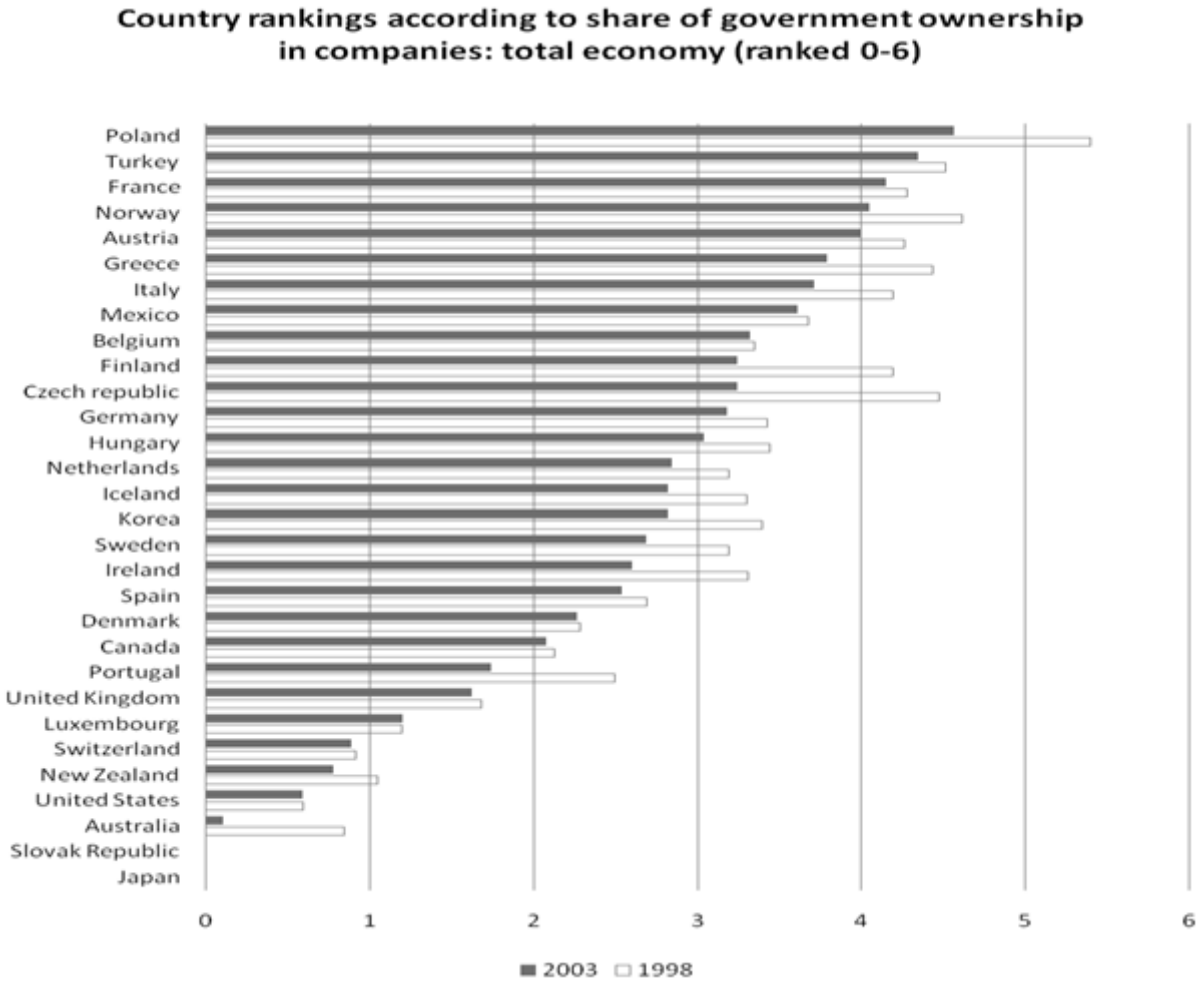
Sources: Conway *et al.* (2005); Conway and Nicoletti (2006).

18. Figure 2 shows the most recent PMR estimates of SOEs' share of the respective national economies in 1998 and 2003[10]. In virtually all OECD countries the share has fallen over the five year period under review. This reflects the ongoing privatisation efforts in the years leading up to 2000 which – given also that the data methodology (Box 1) barely accounts for other sources of change in SOEs' economic importance than privatisation and nationalisation – led to significant drops in this indicator. Also reflecting the privatisation trends of the last decade, the declines were particularly marked in the transition economies and the Mediterranean countries. According to the same indicator, the five OECD countries where SOEs in 2003 accounted for the largest share of the economy were, in order of appearance, Poland, Turkey, France, Norway and Austria. All of these countries scored at or above 4 on the scale from 0 to 6, which based on the methodology developed by Gwartney and Lawson (1997) would imply that SOEs account for broadly 10-20 per cent of the national economy.

[9] Gwartney and Lawson's original scoring ran from 0 to 10; it has been re-normalised for the PMR Indicators.

[10] The data in Figure 2 was already reviewed by OECD (2005). The PMR database will be updated to include 2008 figures toward end-2008.

Figure 2. Country rankings according to share of government ownership in companies



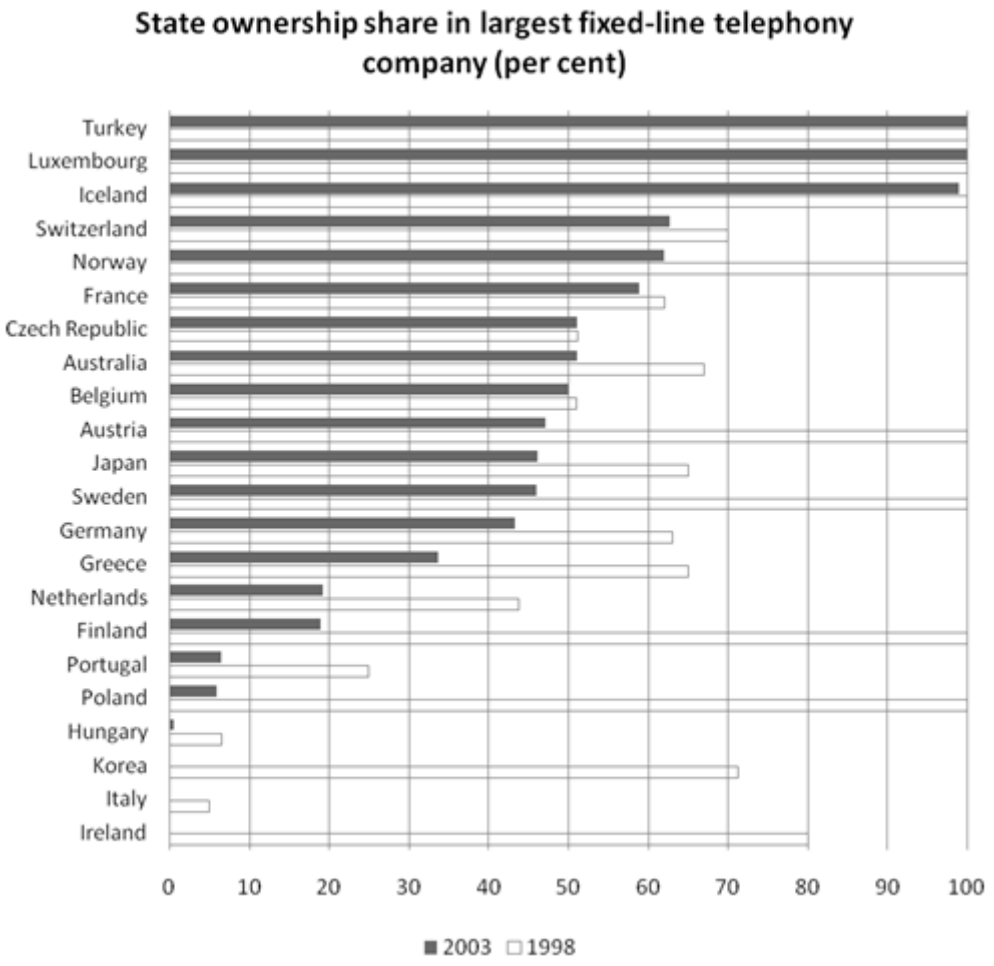
Source: OECD Indicators of Product Market Regulation.

19. A complementary work to the PMR indicators focuses on regulatory restrictions in the service sectors. These so-called non-manufacturing regulation (NMR) indicators deal largely with network industries, as well as business services and retail trade. The composite regulatory indicators, like the PMR, are scoreboards ranging from 0 to 6 but the low level indicators include ownership shares by the state in the dominant company of each sector (Box 1). On the one hand, this is encouraging in that it is one of the few actual quantifications of the degree of state ownership in OECD countries. On the other, it implies a methodology that differs from the PMR indicators as well as the data surveyed in following sections. By limiting itself to the degree of state ownership in the largest enterprise of each sector an important second dimension is lost: this "largest" enterprise may be anything from a monopolist to a company in competition with dozens of others.

20. A couple of illustrative examples have been chosen to illustrate trends based on the available data. Figure 3 shows the state ownership shares of the largest (in practice mostly incumbent) fixed-line telephony providers in OECD countries. In 2003 these were still fully – or almost entirely – controlled by the government in three countries, namely Iceland, Luxembourg and Turkey. (This is no longer the case for Iceland and Turkey due to subsequent privatisation.) The Figure further shows that this sector saw particularly large reductions in state ownership between 1998 and 2003, which obviously reflects the large

telecom privatisations in the late 1990s and year 2000. However (and contrary to the case of mobile telephony) the majority of OECD countries retain a degree of state ownership in their largest "traditional" telecom companies.

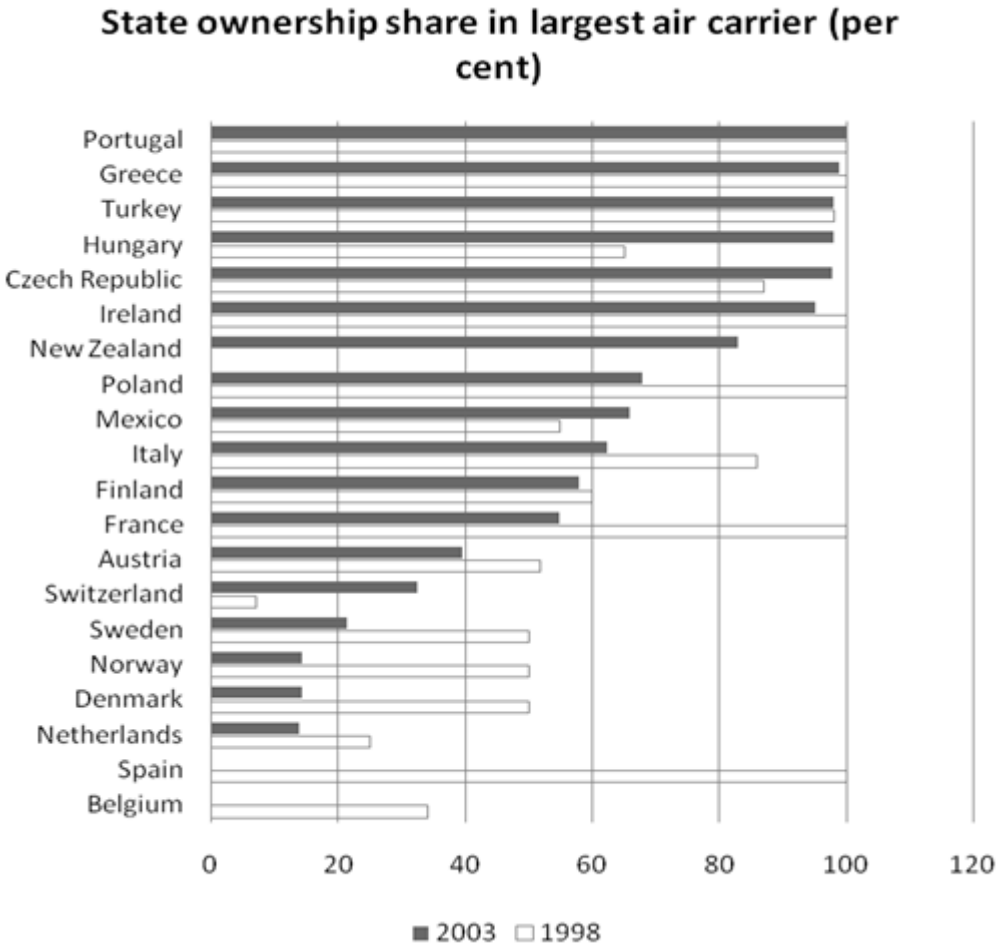
Figure 3. State Ownership share in largest fixed-line telephony company (per cent)



Source: NMR regulatory indicators. Note: countries with an ownership share of zero in both 1998 and 2003 are not included. The Slovak Republic is not included due to absence of 1998 data.

21. A comparatively smaller number of OECD countries have state ownership shares in their largest air carriers (Figure 4). Moreover, in the airline sector state ownership of shares, where it occurs, tends to take the form of controlling positions – the main exception being some of the smaller North European countries. In this sector as well state ownership has receded, but less uniformly than in telecom. In fact, two countries saw the state's involvement increase between 1998 and 2003, namely New Zealand and Switzerland, in both cases due to government recapitalisations of ailing companies.

Figure 4. State ownership share in largest air carrier (per cent)



Source: NMR regulatory indicators. Note: countries with an ownership share of zero in both 1998 and 2003 are not included. Luxembourg and the Slovak Republic are not included due to absence of 1998 data.

3.3 Listed SOEs

22. A snapshot of the larger listed companies in OECD countries paint a similar picture as the previous sections: SOEs account for a non-trivial, but nevertheless limited, share of the corporate economy; however, in certain sectors they continue to play a dominant role. Table 1 summarises country and ownership information for the world's largest 500 listed companies, derived from the latest Forbes 2000 survey. (The Survey was performed in April 2008 and hence does not take account of the latest government injections of capital into a number of large listed companies.)

23. The Table shows, that the large listed companies in OECD countries (a total 392 enterprises out of the top-500) 9 per cent are SOEs. This is clearly above the average shares of GDP that were suggested by the above Figure 1, reflecting mostly the fact that SOEs tend to be larger than the average production unit in the respective economies and that OECD governments have actively corporatized and listed their SOEs in recent years. It may also well be a high-end estimate since Table 3 focuses on the largest listed companies – a stock market segment where one is more likely to encounter SOEs than would be the case, say, among the mid-caps. In terms of market value, SOEs in the OECD area account for just below 7 per cent of the large listed companies.

Table 3. Number of listed companies among the world's top-500, by market value (April 2008)

	OECD countries	Non-OECD countries	Total
Number of enterprises	392	108	500
of which SOEs	27	57	84
Share of SOEs	*9.2%*	*52.8%*	*10.8%*
Market value (US$ billion)	21,298	6,039	27,337
of which SOEs (US$ billion)	1,428	4,257	5,685
Share of SOEs	*6.7%*	*70.5%*	*20.8%*
Share of SOEs in individual sectors (by market value):			
Oil and gas	10.2%	80.7%	39.5%
Telecommunication	27.3%	83.0%	46.1%
Utilities	35.7%	85.6%	41.0%

Source: Forbes 2000 and Secretariat calculations.

24. In some sectors, however, SOEs weigh heavily among the listed companies in the OECD area. This is most notably the case in the network industries (utilities, telecom, transportation) which in many countries have been subject to partial privatisation through IPOs and secondary offerings in recent years. (This point is further elaborated in another document for the consideration of the Working Group [DAF/CG/PRIV(2008)6].) Twenty-seven per cent of listed companies in the telecom sectors of OECD countries (in value terms) have significant government ownership. In public utilities the share, at 36 per cent, is even higher. It bears noting that this finding occurs despite the fact that the largest two OECD economies have little government involvement in the network industries – and none whatsoever in the large listed companies in these sectors. The high share in the utilities sector reflects the huge size of two partly state owned electricity and gas companies in France. Likewise, in the oil and gas sector, the relatively high share shown in Table 1 is mostly due to the continued government participation in Norway and Italy. Conversely, state ownership in listed telecom companies is more evenly spread across OECD countries.

25. Finally, before dabbing into the SOE sectors of the BRIC countries in the following sections, it is worth taking a look at the importance of listed SOEs in non-OECD countries. This is important because companies from these countries have been gaining ground rapidly among the world's largest listed companies in recent years. They now account for just over 20 per cent of the top-500, in terms of both their number and their capitalisation. Half of these enterprises are SOEs, and the SOEs account for more than 70 per cent of their combined market value.

26. To a large extent this reflects SOEs in a few countries, notably China and Russia, which have embarked on a process of partial privatisation in recent years. Among the world's largest 10 listed

companies are SOEs in the hydrocarbons sector such as PetroChina (China), Gazprom (Russia) and PetroBras (Brazil) alongside with the Chinese government controlled bank ICBC and telecom operator China Mobile. However, other countries and other sectors also pull their weight in the top league. For example, Saudi Basic Industries (chemicals) and the Indian Oil and Natural Gas Corporation both have market values estimated at above US$ 50 billion.

4. China[11]

4.1 What is an SOE?

27. "State-owned enterprises" and "state-owned and state-holding enterprises" have been used in official statistics. The term "state-owned enterprises" refers to business entities established by central and local governments, and whose supervisory officials are from the government. Most importantly, this definition of "state-owned enterprises" includes only wholly state-funded firms.[12] This narrow definition by and large implies a prior-reform ownership status of SOEs, in which corporatization and privatization reforms have not yet been fully implemented.

28. This classification of "state-owned enterprises" gives rise to statistical challenges. SOE statistics do not cover the ownership forms of share-holding cooperative enterprises, joint-operation enterprises, limited liability corporations, or shareholding corporations, whose majority shares are owned by the government, public organizations, or the SOEs themselves. Despite its obscurities and underestimation problems, this narrow definition of SOEs has been used for the following statistics on labour and state-owned assets between central and local SOEs.[13]

29. The term "state-owned and state-holding enterprises" has been used since the mid-1990s. State-owned and state-holding enterprises refer to state-owned enterprises plus state-holding enterprises, where state-owned enterprises are (as mentioned) wholly state-funded firms and the definition of "state-holding enterprises" is such that they are those firms whose majority shares belong to the government. This broad and clear definition of SOEs, which fully reflects privatization reform since the mid-1990s and which is mainly used in the following statistics on industrial enterprises, as published by the *China Statistical Yearbook*, includes all state-owned and state-holding companies.[14]

4.2 SOEs' overall share of GDP

30. SOEs' share in production performance has declined enormously over the last generation. It is reported that SOEs currently account for about one-third of the production in the Chinese economy. In 1978, SOEs represented 77.6 per cent of overall industrial production, with virtually the entire remaining portion of industrial production assigned to collective-owned enterprises, indicating that non-public entities were rare except a small number of self-employed individuals. But in 2004, the portion was estimated to be

[11] This section synthesises the analysis of Lee (2008).

[12] These statistics are mainly distributed by the Chinese Ministry of Finance, which acts as a representative owner and supervisor of state-owned assets. As a result, the data primarily present balance sheet information such as asset statistics of local and central SOEs, as found in publications such as the *Finance Yearbook of China*.

[13] Such a narrow definition is also found in the *Statistical Yearbook of China* and the firm classification system issued by the Administration for Industry and Commerce, in which eight types of ownership are classified: state-owned enterprises, collectively owned enterprises, shareholding cooperative enterprises, joint-operation enterprises, limited liability corporations, shareholding corporations, private enterprises, and others.

[14] In this context, the listed companies whose majority shares belong to the government should be classified as "state-holding enterprises," not "state-owned enterprises." Their mother companies, however, which are usually wholly state-funded firms, could be classified as "state-owned enterprises."

about 30 per cent, as the speeches of Mr. Xiaochuan Zhou, president of the Peoples' Bank of China, indicated. SOEs received 34.1 per cent of the short-term loan issued by the state-owned commercial banks, which is approximately analogous percentage to their contribution of GDP.[15]

31. The data for the industrial sector cited in the below section 4.4 indicates that in 2006 SOEs contributed 35.8 per cent per cent of industrial value-added. Based on a 43.3 per cent contribution of industry to the GDP together with other sectoral data, it can be roughly estimated that SOEs' share in the GDP was 29.7 per cent.[16] Based on the same assumption, the SOEs' share in the GDP of 2002 and 1998 could be estimated at 34.5 per cent and 37.6 per cent, respectively. This also verifies the diminishing trend of SOEs' contribution in the Chinese economy.

4.3 SOEs' share of labour

32. One source for keeping track of SOEs' changing share of economic activity is labour statistics. In the labour data section of the *China Statistical Yearbook*, state-owned units are given a similar definition to SOEs. The units registered according to the *Regulation of the People's Republic of China on the Registration of Enterprises and Corporations* include state institutions and social organisations at the central and local level.

33. There are two types of labour data; one is urban employees and the other is urban workers and staffs. The data of urban staffs and workers seem to be more appropriate in representing the employees of the SOEs, in that it doesn't include re-employed retirees and teachers in the schools. However, the number of urban staffs and workers needs to be modified because it also does not include following employees: workers and staffs employed in private enterprises; workers and staffs urban self-employed persons; other workers and staffs not to be included by relevant regulations.

34. The *China Statistical Yearbook* presents consistent data available concerning SOE labour statistics in urban area, the details of which are summarized below (see Table 4). The available statistical evidence may overestimate the real number of employees in SOEs by including employees in non-corporate organisations, but may also underestimate it by excluding those in the state-holding enterprises[17] Corporatization reforms have strongly encouraged transforming state enterprises to limited share companies and share holding companies, further complicating the difficulties of SOE classification.[18]

[15] Reported by Xinhuanet at 2004. 07.08.

[16] To estimate SOEs' share in the GDP, the following statistics were additionally taken into account. In 2006, SOEs, proportion to the construction output value was 22.2%, and the *China Statistical Yearbook* reported the contribution of the construction industry to the GDP as 5.6%. The contribution of primary industries to the GDP was 11.7%, and it is assumed that the proportion of SOEs to primary industries was 0%, as individual farmers should produce most agricultural products. The contribution of primary industries to the GDP was 39.4%, and it is also assumed that the proportion of SOEs to tertiary industries was 0.33%, which ratio was attained based on the assumption that SOEs account for more than half of financial and transport services, while non-SOEs largely create the value-added of retail trade and small businesses.

[17] The critical problem of this traditional SOE definition is that it only includes wholly state-funded enterprises, not state-holding companies, in the ownership forms of limited share companies and share holding companies.

[18] It was reported by the State-Owned Assets Supervision and Administration Commission of the State Council (SASAC) that by the end of 2003, 2,514 firms among 4,223 state-owned medium and large sized enterprises were corporatized.

Table 4. SOEs' share of urban salary and wage earners (%)

Year	Proportions in urban workers and staffs[1]	Proportions in urban employees[2]
1994	66.4	60.9
1998	56.6	43.8
2002	46.7	28.9
2006	34.0	22.7

Source: China Statistical Yearbook

Note: (1) modified labour proportions of state-owned units among urban workers and staffs. (2) unmodified labour proportions of state-owned units among urban employees, in which total number of employees include re-employed retirees and teachers in the schools run by the local people and this will underestimate the proportion of employees in SOEs.

35. Despite these obscurities, it is reasonable to assume that the SOE proportion of the labour force among urban area employment is about 30 per cent, which is almost consistent with the official announcement that SOEs contribution is 1/3 to GDP.

4.4 SOEs in the industry

36. The declining trend of SOE weight in the economy is reflected in the statistics covering industrial SOEs. (The overall industrial sector represented 40.4 per cent of GDP in 1998 and 43.3 per cent in 2006.) The proportion of SOEs in the industrial sector has been continuously decreasing (see Table 5). Between 1998 and 2006, the proportion of industrial output fell from 49.6 per cent to 31.2 per cent; the proportion of value added decreased from 57.0 per cent to 35.8 per cent; and the proportion of total assets reclined from 68.8 per cent to 46.4 per cent. There are two main causes for the dwindling proportion of SOEs: one is the restructuring policies implemented since the mid 1990s; the other is the conversion of government controlled entities into corporate forms not registered as SOEs.

Table 5. Proportions of industrial SOEs

SOEs as share of industrial enterprises (%)					
Year	Numbers	Industrial output	Value added	Asset	Employees
1998	39.2	49.6	57.0	68.8	60.5
2002	22.7	40.8	48.3	60.9	43.9
2006	8.3	31.2	35.8	46.4	24.5
Privately-owned enterprises relative to SOEs' (SOEs=100)					
Year	Numbers	Industrial output	Value added	Asset	Employees
1998	16.5	6.2	4.6	2.0	4.3
2002	119.6	28.7	20.4	9.8	30.2
2006	599.9	68.0	57.5	30.0	109.3
Foreign enterprises' proportions relative to SOEs' ' (SOEs=100)					
Year	Numbers	Industrial output	Value added	Asset	Employees
1998	40.8	49.8	36.6	2.0	20.7
2002	83.8	71.8	53.8	9.8	43.5
2006	243.9	101.2	78.4	30.0	117.4

Source: China Statistical Yearbook

37. The dwindling role of SOE in the industrial economy is particularly visible in the large reduction in employees. To some extent this may reflect the fact that particularly large SOEs have been listed on stock exchanges and hence no longer figure in the data. However, the purely privately owned enterprises have also risen relative to SOEs. In 1998, the number of large-scale private companies was only 16.5 per cent compared to the total number of SOEs, but this had increased six-fold by 2006. In terms of industrial output, value added and assets, the relative proportions of private and foreign companies to SOEs have also increased dramatically.

4.4.1 Subsectors in the industry

38. Most importantly, notwithstanding SOEs' diminishing share in many sectors, SOEs still play a dominant role in core industries, such as petroleum, coking, nuclear fuel, raw chemical material, transport equipment, mining and supply of electric and heat power, gas and water. SOEs appears to have retreated from the more competitive and more labour intensive industries, maintaining less than 10 per cent of industrial output in sectors such as textiles, leather, fur, timber, wood, furniture, paper, and printing. Below is summarized the SOEs' proportions as determined by their role as core industries (Table 6).

39. Compared to the other type ownerships, several distinctive features of SOEs could be observed through the period of 1998 to 2006. First, in terms of the relative size of assets and employed labour, industrial SOEs are larger than private and foreign counterparts. As for the per capita asset size, SOEs are located in more capital intensive sectors and, more interestingly, this higher capital intensity has been markedly strengthened since 1998.

40. Secondly, it appeared that SOEs' corporate performance has been continuously improved. Lee (2008) demonstrates that, even though profitability measured by ROA has been lower than that of private enterprises and foreign enterprises, the return on assets of Chinese SOEs has increased from 0.7 per cent in 1998 to 6.3 per cent in 2006. Enhanced corporate performance of SOEs has clearly shown from their per

capita value added, which was lowest in 1998 but remarkably higher compared to private and foreign enterprises in 2006.

Table 6. SOEs' proportion in individual industries

Sector	Year	Number of firms	Gross industrial output value	Value added of industry	Total assets	Revenue	Labour
Mining	2000	47.3	82.5	87.0	93.0	84.5	n.a.
	2006	12.0	71.0	79.2	82.1	72.1	67.9
Manufacture of food and beverages	2000	47.0	37.5	40.4	51.5	38.2	n.a.
	2006	8.0	11.8	12.5	19.5	12.7	13.5
Manufacture of tobacco	2000	87.2	98.3	99.1	98.2	98.3	n.a.
	2006	79.9	99.3	99.7	99.2	99.3	94.6
Textile, leather, fur, feather	2000	17.0	21.1	22.9	35.6	21.8	n.a.
	2006	2.2	4.1	4.1	7.9	4.3	6.1
Timber, wood, furniture	2000	21.7	12.2	13.9	30.3	12.0	n.a.
	2006	3.0	5.9	5.7	12.0	6.0	5.9
Paper, printing, article for culture and education	2000	33.6	24.8	29.3	42.8	25.8	n.a.
	2006	8.2	9.9	11.5	18.8	11.0	9.8
Petroleum, coking, nuclear fuel, raw chemical material	2000	32.0	68.1	63.5	75.8	69.4	n.a.
	2006	7.7	48.9	36.0	48.8	49.6	33.3
Medicines	2000	45.3	49.6	50.6	60.8	52.5	n.a.
	2006	11.0	19.9	19.0	29.5	21.9	24.2
Chemical fibres, plastics, rubber	2000	17.8	29.9	30.4	46.0	30.3	n.a.
	2006	3.3	10.9	9.2	17.1	11.5	10.6
Ferrous and non-ferrous metals	2000	24.7	46.2	49.9	65.6	48.4	n.a.
	2006	5.9	29.4	32.1	43.0	31.0	23.5
Machinery	2000	34.2	39.6	40.3	61.8	40.8	n.a.
	2006	7.4	23.3	21.9	34.1	23.3	23.2
Transport equipment	2000	40.1	67.0	67.2	78.2	68.3	n.a.
	2006	12.7	50.2	48.4	58.2	51.4	39.6
Electric and communication, computer, office equipment	2000	26.3	30.0	32.5	44.9	30.5	n.a.
	2006	6.6	8.8	9.4	15.9	8.8	9.2
Supply of heating, power, gas and water	2000	87.8	85.1	87.1	89.3	90.4	n.a.
	2006	69.7	88.2	86.0	87.3	89.0	87.1

Source: China Statistical Yearbook

4.5 The internalisation of SOEs

4.5.1 Going-global strategy

41. SOEs embarked upon a process of internationalisation when the "Going-Global Strategy (*zouchuqu*)" was proposed at the 5th plenary session of the 15th central committee in 2000. The Strategy means in a practical sense that government supports and encourages globalisation of enterprises. At the political level, it moreover implies that government economic policy takes into account international issues like regional free trade agreements and natural resource development projects abroad, such as funding oil exploration in Africa.

42. To help Chinese companies going abroad, the Chinese government launched several policies. In 2004, the Ministry of Finance and Ministry of Commerce collaborated to support start-up funds for overseas investments. National Development and Reform Commission (NDRC) and the Bank of Export and Import drafted policies to support key overseas economic developments by creating loan programs by and streamlining overseas investment procedures.

4.5.2 Major goals of internationalisation

43. Major goals of "going global" include expanding foreign market shares, gaining access to natural resources abroad, attaining more advanced technologies, and enhancing the corporate brand values of

Chinese enterprises. These goals are closely related to changes in the Chinese economic environments. First, the larger the exports by Chinese enterprises, the higher would be the trade barriers against Chinese products. The barriers against "Made in China" goods encouraged Chinese companies to build up a multi-national production system in order to avoid trade conflicts. Second, as the Chinese economy grows, accessibility to and feasibility of resources have been a critical issue for the sustainability of the Chinese economy. Resource scarcity has been a growing concern for the Chinese government, and has led to developing natural resources in foreign countries. Third, despite their significant growth, Chinese companies have fallen behind in terms of global competitiveness due to lacking high technology and corporate brand power and recognition.

44. China's internalization has put particularly large SOEs in the spotlight. First, the objective of overseas resource development is attainable mostly by large scale SOEs. Second, although developing high technology is also a stated objective of these overseas investments, investments in the high-tech sector also are undertaken primarily by big companies. Third, although trade barriers are an issue in attempting to open larger markets for Chinese products, they are often felt less acutely by large SOEs enjoying a dominant market position.

4.5.3 SOEs' role in outward FDI

45. The statistics show a trend of strengthened overseas investment since 2000. During the 10th Five Year Economic Development Plan period from 2001 to 2005, the amount of outbound foreign direct investment was US$ 22.3 billion, nearly half of China's outward direct investment position (the "FDI stock") of US$ 57.2 billion by 2005. In 2006 and 2007, the outbound FDI[19] was US$ 13.4 billion and 18.7 billion, respectively, which is indicative of a sustained overseas investment boom.

46. The largest proportion of overseas investments has come from large scale SOEs – although a steadily increasing number of private companies also invest abroad. [20] In 2006, 81 per cent of FDI was undertaken by SOEs, and among those SOEs 82 per cent were owned by the central government. The previous point about an emphasis on large SOEs is moreover particularly visible in outward FDI. According to Lee (2008), investments aimed at acquiring high technologies and corporate brands largely originate with big SOEs, and overseas resource development is almost exclusively their domain.

47. There are many cases which illustrate the large amount of overseas investment made by SOEs. In terms of overseas resource development, China Petroleum & Chemical Corporation (SINOPEC) acquired an Angolan oil well in 2006 for US$ 692 million. China National Petroleum Corporation (CNPC) acquired Petro Kazakhstan, and China National Offshore Oil Corporation (CNOOC) acquired 45 per cent of shares in a Nigerian ACPO oil well for US$ 229 million. In terms of the acquisition of high technology and corporate brand, one famous case was the acquisition of IBM's PC division by high-tech state owned enterprise LENOVO for US$ 175 million in 2004. In 2003, the large state owned enterprise TCL acquired

[19] In 2006, the largest destination countries or regions for China's outbound FDI were the Cayman Islands, Hong Kong, the British Virgin Islands, Russia, and the United States, in that order. It must be strongly suspected that the FDI to offshore financial centres was in fact flow-through investment on its way to the large industrialised economies. In the case of Hong Kong, though, there is also an element of "round tripping" of essentially domestic investment.

[20] However, SOEs themselves represent only a small proportion of number in investing enterprises. For example, in 2005, SOEs comprised 29% of number of enterprises achieving outbound FDI, which was a decrease from 35% in 2004. This means more and more non-SOEs are participating in overseas investments. And even though the number of SOEs participating overseas investment is small but its individual investment volume is very large.

one of the largest TV producers in the world, the French company Thomson, and in 2002 they acquired German company, Schneider Electronics.

4.6 Listed SOEs

48. Initial Public Offerings (IPO) of SOEs are seen by the Chinese authorities as an effective measure to support SOE reform. As part of the reforms toward a "Modern Enterprise System," SOEs were compelled to transform into incorporated entities. Many of the more important companies were encouraged to list their shares on stock markets so as to have more transparent ownership and efficient governance mechanisms.[21] In fact, IPOs of several key companies appear to have had a positive impact on overall SOE reform.

4.6.1 Classification issues

49. It is not always straightforward to determine whether a listed company qualifies as an SOE. There are several classes of shares, including state shares, legal entity shares, individually owned shares and foreign shares. The legal entity shares are divided into state and non-state legal entity shares, but it is often difficult in practice to make a distinction.[22] More critically, it is hard to find consistent data sets which distinguish state shares from non-state legal entity ones; the data only reports total legal entity shares.

50. One method of distinguishing ownership of listed companies involves tracking the ownership hierarchy of the largest shareholders to identify an ultimate owner. For example, among 1,342 listed companies in 2004[23], 864 companies – based on the requirement that states shares comprise a proportion of greater than 10 per cent (without considering hidden state shares in the overall legal entity shares) – were classified as SOEs, but 942 companies could be classified as SOEs if the actual owner of the largest shareholder was tracked and revealed in their ownership hierarchy of the annual report (see Table 7).

[21] In 1995, the report to the 15th National Congress of the Community Party of China stressed more SOEs should be transformed into share-holding companies.

[22] The main difference between state shares and state legal entity shares lies in the proportion owned by the governments. When asset optimization procedures are practiced, states shares in the newly restructured company are appreciated. If the government invests in shares equal to 50% or more, these shares would be classified as "state shares." If the investment is less than 50%, the shares are classified as "state legal entity shares."

[23] Because of accounting differences, financial companies were excluded in this classification.

Table 7. Number of listed companies by ownership types

	1998	1999	2000	2001	2002	2003	2004
Private	85	109	141	159	201	270	351
Foreign	14	11	14	14	14	13	15
Collective	21	29	32	32	32	30	34
SOEs	701	769	867	931	945	942	942
Central SOEs	111	131	152	168	174	186	198
Local SOEs	562	602	664	704	704	685	674
Direct local SOEs	108	95	95	92	75	60	54
Indirect local SOEs	454	507	569	612	629	625	620
Pubic SOEs	9	12	17	20	21	20	21
Other SOEs	19	24	34	39	46	51	49
Total listed companies	821	918	1,054	1,136	1,192	1,255	1,342

Source: CSMAR database, classified by author.

Note: Financial companies are excluded in this statistics.

51. If listed companies are classified by actual ownership, four ownership types would emerge: private companies; foreign companies; collective-owned companies; and state-owned companies. State-owned companies would be further divided into local SOEs (owned by local government), central SOEs (owned by SASAC representing central government), public SOEs (owned by public institutions) and others (owned by the state but unclassifiable). Lastly, most SOEs have multi-hierarchical ownership structures, but there are a few which are directly owned by their actual owner. This is only seen in the local SOEs, whose incorporated reforms have lagged behind other forms of ownership, and which still remain directly owned by local government. [24]

4.6.2 Share of SOEs in the overall stock market

52. Based on their classification, SOEs' with a state share of more than 10 per cent have continuously increased its share in the market capitalization of the Chinese stock market. And more importantly, SOEs have overwhelmed market capitalization. In 2007, SOEs' share grew to 83 per cent from 73 per cent in 1995 (Table 8).

[24] In 2004, 54 companies among 942 listed SOEs were directly owned by local government.

Table 8. SOEs' share of stock market capitalisation

Year	Volume of market capitalisation (100 million yuan)		SOEs' share (%)
	Overall market	SOEs	
1995	3,867 (311)	2,826 (211)	73.1
1999	27,974 (923)	19,421 (626)	69.4
2003	45,255 (1,266)	37,108 (928)	82.0
2007	400,409 (1,516)	332,769 (936)	83.1

Source: CSMAR database

Note: In this table, all of the A-stock companies in the Chinese stock market are included. Figures in parentheses are the number of companies referred.

53. The rising trend in SOEs' share in stock capitalization is mainly attributed to the SOE reform policy. This encouraged SOEs to transform themselves into shareholding companies and further promote the listing of large scale and top-ranking SOEs (see the dates of IPOs in Table 9). For example, in the Shanghai stock exchange, eight SOEs were listed in the top 10 companies based on their market capitalization value in 2006 and 2007. These eight large-scale SOEs already accounted for 50 per cent of the total market capitalization in the Shanghai stock exchange in 2007. As a result, the share of SOEs has recently seen a significant increase in the market capitalization of the Chinese stock market.

Table 9. Top 10 companies by market capitalisation in Shanghai exchanges, 2002 and 2007

Rank	Name	Date of IPO	Ownership	Capitalisation (100 million yuan)	Ratio to total market capitalization (%)
Year: 2007					
1	PETRO CHINA	2007.11.05	Central SOE	50,131	18.6
2	Industrial and Commercial Bank of China	2006.10.27	Central SOE	20,403	7.6
3	China Petroleum & Chemical	2001.08.08	Central SOE	16,382	6.1
4	China Life Insurance	2007.01.09	Central SOE	12,065	4.4
5	Bank of China	2006.07.05	Central SOE	11,753	4.4
6	China SHENHUA Energy	2007.10.09	Central SOE	10,819	4.0
7	PingAn Insurance	2007.03.01	Foreign	5,078	1.9
8	China Merchants Bank	2002.04.09	Central SOE	4,772	1.8
9	Bank of Communication	2007.05.15	Central SOE	4,050	1.5
10	China Pacific Insurance	2007.12.25	Central SOE	3,807	1.4
Year: 2002					
1	China Petroleum & Chemical	2001.08.08.	Central SOE	2,105	8.3
2	China Unicom	2002.10.09	Central SOE	530	2.1
3	HUANENG Power	2001.12.06	Central SOE	518	2.0
4	BAO Steel	2000.12.12	Central SOE	516	2.0
5	NINGHU Expressway	2001.01.16	Local SOE	469	1.8
6	China Merchants Bank	2002.04.09	Central SOE	465	1.8
7	PUDONG Development bank	1999.11.10	Local SOE	356	1.4
8	MinSheng Bank	2000.12.19	Private	238	0.9
9	LUJIAZUI	1993.06.28	Local SOE	179	0.7
10	SHENNENG (Group) Company	1993.04.16	Local SOE	177	0.7

Source: The Shanghai Stock Exchange

4.7 Summing up

54. China has, as would be expected given the recent history of its economy, an elaborate statistical apparatus for assessing SOE activities. However, data are mostly focus on companies that are under the continued direct oversight of the public authorities and, for instance, exclude both listed companies with minority state ownership and joint ventures between state-controlled entities and foreign companies. Hence, the following observations must be considered as low-end estimates:

- Chinese SOEs are estimated for the purpose of this paper (since no aggregate figure is made public in China) at 30 per cent of GDP in 2006. This represents a decline from the 38 per cent that was the SOEs' estimated share in 1998. These estimates are consistent with occasional pronouncements by Chinese officials.

- The share of employment in SOEs is approximated by these companies' share of "urban workers and staff", which stood at 34 per cent of total employment in this category in 2006. This is significantly beneath the 66 per cent share recorded in 1994 – which latter figure, however, seems somewhat at odds with the GDP estimates[25].

- Particularly good data are available for the industrial sector. Here, perhaps unsurprisingly, the SOEs' share is somewhat higher than in the total economy. SOEs accounted for 36 per cent of the industrial value added in 2006, down from 57 per cent in 1998. During the same period the SOE share of industrial employment dropped from 61 per cent to 25 per cent.

- SOEs are a totally dominant segment of Chinese stock markets. In 2007 they accounted for 83 per cent of total stock market capitalisation in mainland China. This is 10 percentage points above the share recorded in 1995, an increase which reflects massive sell-offs of minority shares in SOEs through public offerings.

5. Russia[26]

5.1 Main types of SOEs in Russia

55. The Civil Code lists all legal forms for enterprises operating in the Russian Federation. State-owned enterprises typically take one of the three following legal forms:

56. Joint stock companies (JSCs). Most state-owned JSCs with either partial or full state ownership are incorporated as open joint stock companies. In some cases they adopted the legal form of closed joint stock companies. The main differences between closed JSCs and open JSCs lie in the need for consent of other shareholders for ownership transfers to other parties, and in the lower disclosure requirements. The basic law that governs their organization is the Law of Joint Stock Companies from 1995. Open JSCs are obliged to publish quarterly and yearly financial reports, to be audited externally, and may go bankrupt if they do not fulfil their financial obligations. The legal form of the open joint stock company provides flexibility for the participation of private investors, and allows raising capital on the stock and bond markets. Examples of open JSCs with 100 per cent ownership of the Federal Government are Russian Railways, United Aircraft Corporation, and United Shipbuilding Corporation. Examples of open JSCs with partial state ownership are Gazprom, Rosneft, Aeroflot and several banks.

[25] One suspicion would be that industrial workers are over-represented in these statistics – which would seem consistent with the observations in the following bullet point.

[26] This section synthesises the analysis of Sprenger (2008).

57. *Unitary enterprises at the federal, regional, or municipal level*. Their Russian acronyms are FGUP (standing for Federal State Unitary Enterprise), GUP (State Unitary Enterprise), and MUP (Municipal Unitary Enterprise), respectively. The basic law regulating their operation is the Law on State and Municipal Enterprises from 2002. Unitary enterprises do not have ownership shares, and are fully controlled by the Russian government. Unitary enterprises have only limited rights regarding the use of their property, and many types of transaction have to be approved by the corresponding government agencies. Unitary enterprises are generally not obliged to disclose financial information, but are audited by the Audit Chamber of the Russian Federation. Examples are Rosoboronexport and Post of Russia.

58. *State Corporations.* This third legal form has gained importance only recently. In 2007, six State Corporations were founded by the Russian Government. Each State Corporation is founded by a separate law. The status of a State Corporation is not directly defined in the Civil Code, instead it has evolved as one form of non-commercial organisations. The government acts as the founder, transfers certain assets to the State Corporation, but is not responsible for the financial obligations of the corporation. The Bankruptcy Law does not apply to State Corporations, and they are not controlled by the Audit Chamber of the Russian Federation. The six State Corporations founded in 2007 include Vneshekonombank and the Rosatom energy group.

59. In addition, State Institutions – a form of non-commercial public organisations – fulfil government objectives without the transfer of property to these organizations. In contrast to the State Corporations, these organizations are indeed non-commercial in most cases. They form part of the official statistics on state-owned enterprises in the next section, but are not of primary interest in this report.

5.2 Weight of SOEs in the Russian economy

5.2.1 Statistical sources

60. Several data sources are used in this section to evaluate the importance of SOEs in Russia, as well as their institutions of corporate governance and their performance: official data from Rosstat, the Federal Statistics Service, other government agencies, and results from a survey study of 822 enterprises conducted by researchers of the Higher School of Economics Moscow and Hitotsubashi University Tokio in 2005 (henceforth, the HSE survey). In the HSE survey, SOEs are defined as enterprises with a stake (of any size) owned by the government (at any level).

61. With regard to the official statistics from Rosstat, some words of caution are required. In its publications, Rosstat classifies the ownership forms of enterprises as follows: (i) domestic, fully state-owned[27]; (ii) domestic, mixed state and private ownership; (iii) domestic, privately owned; (iv) foreign ownership; and (v) mixed foreign and domestic ownership. Rosstat statistics do not, however, contain the exact ownership stakes and how they average across firms. The classification has a number of drawbacks if one wants to evaluate the role of state ownership:

- It contains only direct state ownership. Enterprises that are owned by a company that is controlled by the state are counted as private enterprises. For example, Gazprom Neft, a 74 per cent subsidiary of Gazprom would be considered a privately owned company even though Gazprom and therefore Gazprom Neft are fully controlled by the federal government.

- Since Rosstat does not distinguish majority and minority stakes in the category of domestic, mixed ownership one cannot infer whether these firms are controlled by the state or not.

[27] State property is defined as property owned by the Russian Federation (federal property) and property owned by the constituent entities of the Russian Federation.

- The category of mixed foreign and domestic ownership may include SOEs insofar they have also foreign shareholders. For example, Gazprom and Rosneft are both controlled by the government, but have foreign owners, and therefore fall into this category.

5.2.2 Number and main types of SOEs

62. With these caveats in mind, a first indication of the importance of SOEs is their share of the overall number of registered firms and organizations in Russia (Table 10). The information is based on data on the official registration of legal persons. Firms and organizations include large and small commercial business firms except individual entrepreneurs, non-commercial organisations, as well as state institutions as long as they are registered as separate legal entities.

63. It appears that a low-side estimate of the fraction of firms and similar organisations where the state has an ownership stake would be 11 per cent in 2008.[28] In the HSE survey of industrial and communication firms from 2005, 11.6 per cent of the firms had a stake of the federal government, and 7.9 per cent had a stake of a regional or municipal government. The fraction of firms with a participation of the government at any level was 17.7 per cent (as some firms had both federal and regional/municipal governments as owners). The higher incidence of state ownership in the survey may be explained by the fact that SOEs in Russia are on average larger in size than private firms. The median number of employees of SOEs in the sample was 880, compared to 414 for private firms, and the median volume of sales was 350 million rubles in SOEs, compared to 195 million in private firms. That is, SOEs are roughly twice as large as private firms on average.

Table 10. Number of registered firms and organisations, by ownership forms

	1996	2002	2008
Total number of firms and organizations (in thousands)	2250	3594	4675
of which with the following ownership forms (in %):			
State	14.3	4.3	3.0
Municipal	8.8	6.4	5.6
Private, domestic	63.4	75.8	82.5
Religious and other non-profit organizations	4.2	6.6	4.6
Other ownership forms[29]	9.3	7.3	4.3
of which, mixed state and private, domestic	n.a.	n.a.	1.8[30]

Source: Rosstat, Statistical Yearbook of Russia, various issues; Russia in Figures 2008. Note: All data are as of 1 January.

64. From Table 10 it also appears that there has been a gradual increase in private ownership over the last decade. More precise official information is available for the number of firms owned by the federal government. The following Table 11 presents data on the number of federal state unitary enterprises and stakes in JSCs, and on the size of these stakes. The table also includes the number of firms where the government holds a special right, called a golden share. It allows the government to send a representative to the board of directors even in cases where it does not have a regular shareholding, to veto certain decisions, and to send a representative to the board of directors without holding common shares. Golden shares were often created in the privatization process in enterprises of strategic importance.

[28] To arrive at this figure one needs to add together the shares of state, municipal and mixed state and private, domestic ownership. As noted above, also firms with mixed domestic and foreign ownership might have a participation of the state.

[29] Including domestic mixed state and private; foreign; and joint foreign and domestic.

[30] 2007 figure.

Table 11. Ownership of the federal government: unitary enterprises, stakes in JSCs and their size, golden shares.

	Jan 1, 2001	Jan 1, 2008
Number of Federal State Unitary enterprises	9394[31]	5709
Number of JSCs with a stake of the federal government	3524	3674
of which with size of the stake (in per cent):		
Less than 25%	49.5	21.0
From 25% to 50%	34.4	17.6
More than 50%, but less than 100%	14.4	7.3
100%	1.7	54.1
Number of firms where the federal government owns a golden share (only)	n.a.	181[32]

Source: The Forecast Plan (Program) of Privatization of Federal Property, various issues and the Main Directions of Privatization of Federal Property for the Years 2010-2011; IET (2008), Chapter 5.1, Tables 4,5 and 7, based on privatization plans of the Russian government for previous years.

65. While the number of Federal State Unitary enterprises has steadily declined since 2001, the number of JSCs has remained broadly unchanged. Both trends can be explained by the ongoing process of corporatization of unitary enterprises into JSCs with 100 per cent stake of the government. In some recent cases the government has also strived to buy back once privatized firms and, in most cases, to establish majority control over these enterprises. In general, the data in Table 2 reflects the policy of the Russian government to privatize minority stakes of firms in non-strategic sectors, and to gain or maintain control over strategic assets. In 2008, 61 per cent of all stakes of the federal government in JSCs were majority stakes (more than 50 per cent ownership), compared to 25.2 per cent in 2005 and only 16 per cent in 2001.

66. The data on the size of government stakes can be complemented by information from the HSE survey from 2005: Among the 93 firms in the sample with a stake held by the federal government, 32 (34 per cent) were majority stakes. The situation was different for firms with stakes of regional or municipal governments: Out of 63 such firms in the sample, only in 10 firms (16 per cent) this stake was larger than 50 per cent. Most of the stakes of regional or municipal government were in fact small minority stakes (59 of them were smaller than 10 per cent), while stakes of the federal government were smaller than 10 per cent only in 20 per cent of the cases.

5.2.3 Economic importance of SOEs

67. A more realistic picture of the economic weight of SOEs can be obtained from looking at the weight of enterprises with a state participation in overall employment, fixed assets, investment, and industrial production. The following Table 12 presents the numbers for employment for selected years from 1990 to 2007. The main finding from the table is that the fraction of people employed in firms with state and mixed (domestic) ownership has declined steadily from 86 per cent in 1990 to 39 per cent in 2007. (One should recall that the state category here includes state institutions whenever they are separate legal entities, e.g. universities and hospitals.)

[31] 2002 figure.

[32] 2007 figure.

Table 12. Number of employees by ownership forms, 1990-2007

	1990	1995	2000	2005	2007
Total number of employees (yearly average, in thousand of persons)	75,325	66,330	64,517	66,792	67,701
of which in firms of different ownership forms (%)					
State and municipal	82.6	42.2	37.8	33.7	32.0
Mixed state and private, domestic	4.0	22.2	12.6	7.8	6.9
Private, domestic	12.5	34.3	46.1	54.1	56.4
Religious and other non-profit organizations	0.8	0.7	0.8	0.6	0.6
Foreign and joint foreign and domestic	0.1	0.6	2.7	3.8	4.1

Source: Rosstat, Statistical Yearbook of Russia, various issues, Russia in Figures 2008.

68. For the share of SOEs in the overall capital stock of the Russian economy, Rosstat uses a different classification for SOEs. Here, state ownership comprises government institutions, state unitary enterprises, and business entities with a participatory interest of the state of more than 50 per cent (direct or indirect). Fixed assets are assets used for production of goods and services, such as buildings, equipment, vehicles etc. According to data surveyed by Sprenger (2008) the share of state-owned firms of the productive assets of the Russian economy is about one fourth, and has remained broadly unchanged since the mid-1990s.

69. A slightly different picture derives from the capital investment in the Russian economy (Table 13). Here, the data sources force a return to the initial classification of fully state-owned, mixed, private, foreign, and mixed foreign and domestic ownership. Table 4 shows a steady decrease in the share of SOEs in capital investment, although the process has slowed down during the last years. This table should give the clearest picture on the state share in the corporate sector of the Russian economy among the data presented so far (subject to the caveats concerning the appropriateness of the ownership classification to measure the extent of state ownership above). The data on capital investment does not suffer from re-evaluations of the capital stock, and capital investment should be less important in state institutions, which account for a considerable share of employment.

Table 13. Capital investment by ownership forms

	1995	2000	2005	2007
Capital investment (in billion of rubles, 1995 in trillion of rubles)	267.0	1165.2	3611.1	6626.8
of which in firms of different ownership forms (%)				
State	31.3	23.9	18.8	17.2
Municipal	6.3	4.5	3.8	4.0
Mixed state and private, domestic	46.2	27.8	12.9	10.4
Private, domestic	13.4	29.9	44.9	52.3
Religious and other non-profit organizations*	0.1	0.2	0.2	0.1
Foreign	-	1.5	8.2	6.6
Joint foreign and domestic	2.7	12.2	11.2	9.4

* including consumer cooperatives

Source: Rosstat, Statistical Yearbook of Russia, various issues; Russia in Figures 2008. All data is as of January, 1.

5.2.4 SOEs in the industrial sector

Ideally, one would like to measure the weight of SOEs in the economy by the fraction of GDP that they produce. Unfortunately, such data is not available in Russia. The official statistics provide relevant

data concerning industrial production, but only until the year 2004.[33] Table 14 shows the breakdown of industrial production by ownership forms.

Table 14. Fraction of industrial production by ownership forms, 1994-2004

	1994	2000	2004
State	19.9	8.2	6.7
Municipal	1.6	1.1	1.3
Mixed state and private, domestic	60.9	33.1	20.4
Private, domestic	15	41.1	47.2
Religious and other non-profit organizations	0.2	0.2	0.3
Foreign and joint foreign and domestic	2.4	16.3	24.1

Source: Rosstat, Statistical Yearbook of Russia, various issues.

5.3 Sectoral distribution of SOEs

70. The most recent industry classification of SOEs, employed by the Russian Plan of Privatization, is presented in Table 15. The number of federal unitary enterprises (FGUPs) in the military-industrial complex is not given explicitly in the table (they are either subsumed under "Industry and Construction" or "Other sectors"). However from the list of strategic enterprises[34] it is known that there is a large number of FGUPs in this sector. Unfortunately, there are no statistics for the sector shares where firms are weighted by their size in terms of output or employment. Nevertheless, having the greater firm size in the industrial sectors in mind, one must assume a high weight of the fuel and energy sector as well as of the military-industrial complex within the population of enterprises with federal state ownership.

Table 15. Sectoral distribution of FGUPs and JSCs with a stake of the federal government (Jan. 2008)

	FGUPs		JSCs	
	units	per cent	units	per cent
Non-production Sectors (mostly services)	1151	20.2	638	17.4
Industry and Construction	1744	30.5	695	18.9
Fuel and Energy			597	16.2
Military-industrial Complex			586	15.9
Agriculture	618	10.8	761	20.7
Forestry	37	0.6		
Transport and Communication	409	7.2	397	10.8
Other Sectors	1750	30.7		
Total	5709	100.0	3674	100.0

Source: The Forecast Plan (Program) of Privatization of Federal Property for the Year 2009 and the Main Directions of Privatization of Federal Property for the Years 2010-2011.

71. Concerning the output share of SOEs in some industries, Rosstat disseminates official statistics for the share of production by firms of different ownership forms for various sectors of the economy. Unfortunately, the data until year 2004 and afterwards are barely comparable because of a switch to a new industry classification. In 2006, the output share of fully state-owned and mixed domestic enterprises was 19 per cent in the manufacturing industry, 17 per cent in fuel production, 15 per cent in coke and petroleum

[33] For 2005 and 2006, figures for the production of various sectors of the economy are available. They are presented in the following section.

[34] See the following section for details on the list of strategic enterprises.

products, 12 per cent in metallurgy, and 26 per cent in the chemical industry. This share has been relatively stable in the last couple of years, except for fuel production where the SOE share jumped by 3 percentage points between 2005 and 2006.

72. Finally, there are no Rosstat data on the ownership distribution in the banking sector. Vernikov (2007) estimates that the share of state-controlled banks in total assets as of January 1, 2006 was about 45 per cent. The four largest banks, Sberbank, Vneshtorgbank (VTB), Gazprombank, and Bank Moskvy – all of them state-owned – account for the largest part of this share: They held together about 41 per cent of total assets. The rest is held by foreign banks (about 10 per cent), a few large private Russian banks such as Alfabank, Uralsib, Russian Standard and MDM Bank. But the largest part comes from hundreds of small banks with only local importance.

5.4 Internationalisation of SOEs

73. The Russian SOE sector has become increasingly "internationalized" in recent years through foreign participation in some Russian SOEs as well as outward foreign direct investment (FDI) by others. As for the first of this points, inward FDI may to some extent have been curtailed by a recent government attention to "strategic" considerations. In many government plans and announcements on the management of state property, the terms "strategic sector" and "strategic enterprise" appear. A Presidential decree with a list of more than one thousand strategic enterprises was issued in 2004 and changed several times since then. It requires explicit approval of the President for privatization and new share issues.

74. In addition, the Russian parliament approved a law on foreign investment in companies with strategic impact on the national security of the Russian Federation in May 2008. It contains a list of strategic sectors where foreign investors have to have an explicit permission to acquire a controlling stake of a company. This list mostly includes sectors that are deemed to be of strategic importance: the military-industrial complex, the production, transport, and storage of radioactive materials, exploration and extraction of natural resources on subsoil plots of federal importance, up to radio and television broadcasting and newspapers with more than one million copies. Foreign private owners cannot acquire more than 50 per cent of the voting rights in such companies without special permission. The threshold for foreign governments, international organizations or organization that are under their control is 25 per cent of the voting rights.

75. That said, several large SOEs have foreign shareholders. For example, a representative of the German utility company E.On is member of the board of directors of Gazprom. The head of the state holding United Aircraft Corporation has announced plans to attract private capital, in particular foreign capital.

76. The last years have seen a surge in outward FDI from Russia, no doubt buoyed by the country's hefty current account surpluses. The outward direct investment positions have grown from US$ 20 billion in the year 2000 (8 per cent of GDP) to US$ 255 billion in 2007 (20 per cent of GDP).[35] Two recent academic studies independently compiled lists of the largest Russian multinational companies (Ehrstedt and Vahtra, 2008); Skolkovo, 2007). Most of these companies operate in the oil and gas, metal and mining industries.

77. In both lists, Russian companies with private owners dominate. The privately owned LUKoil is identified as the Russian company with the largest amount of foreign assets. Gazprom appears in both lists among the top three Russian multinationals. Gazprom's foreign assets account for about 5 per cent of its total assets, and include downstream investments in Western Europe and gas and oil production in CIS

[35] Source: UNCTAD, World Investment Report 2008.

countries. The company supplies roughly one third of the total gas imports of Western Europe. Recent acquisitions of Gazprom abroad include a 51 per cent stake in the Serbian energy company Naftna Industruja Srbije (NIS), an oil and gas distributor and operator of oil refineries, and the Belorussian gas distributor Beltransgaz.

78. Russia's largest state-owned oil company, Rosneft, is more focused on the domestic and CIS market. In September 2007, the 100 per cent state-owned company Zarubeshneft accomplished a 12 fold increase of its authorized capital to finance a joint venture with the Vietnamese PetroVietnam. It acquired four offshore fields in the Nenetsk Autonomous Region in 2008 that the company plans to operate jointly with its Vietnamese partner. The Skolkovo list also includes two state-owned shipping companies, Sovkomflot and Novoship among the largest ten Russian multinationals. The companies have been merged since then.

5.5 Listed SOEs

79. The Russian stock markets have grown quickly in recent years, both by the number of issuers and by the overall market capitalization, even though the recent market falls have made the RTS and MICEX indices drop back to their 2004 levels. At the end of 2007, stocks of 302 issuers were traded at RTS, compared to 261 in 2005. Most of these are, however, traded only infrequently. The number of regularly traded stocks is about 150.[36] Stocks of Russian companies are not only traded at the two main Russian stock exchanges; depository receipts issued by several of them are traded in New York, London and Frankfurt.

80. According to estimates of a Russian investment bank (Troika Dialog, 2008) federal and regional authorities controlled about 40 per cent of the market capitalization of the Russian stock market at the end of 2007, as compared to 24 per cent in 2004. There are several reasons for this increase:

- In several cases, minority stakes of the government were increased up to a controlling level, e.g. in Gazprom.

- Formerly private enterprises were acquired by SOEs. For example, Rosneft was the main beneficiary of the asset sales of the formerly largest Russian oil company Yukos, whose assets were sold at auctions after a huge back tax charge from the Federal Tax Service.

- Large companies such as Rosneft and Vneshtorgbank were taken to the stock market by means of initial public share offerings (IPOs). Rosneft's IPO in 2006 turned it into the second largest Russian company by market capitalization.[37]

81. At the same time, the share of private owners (core shareholders and strategic investors) went down from 50 per cent in 2004 to 33 per cent in 2007. The share of public owners (free float) has been stable. The weight of SOEs in the overall market capitalisation is of course largely due to their size, which makes it easier for them to bear the costs of an IPO. 30 per cent of SOEs in the HSE survey report that they have securities (stocks, bonds or eurobonds) listed at Russian stock exchanges, compared to only 8 per cent of private firms.

[36] This is the number of regularly traded stocks among the list of the 200 largest companies by market capitalization compiled by the Expert Rating Agency.

[37] According to the Expert list (see footnote 17). The Rosneft IPO, as well as the IPO of the Vneshtorgbank and a secondary public offering (SPO) by Sberbank in 2007 were referred to as "people IPOs" since shares were sold to a large number of individuals.

Table 16. The ten largest listed companies controlled by the state, 2004 and 2008

2004 (as of September 1)				**2008** (as of September 1)			
Rank	Company name	Market capitalization (million US$)	State share (%)	Rank	Company name	Market capitalization (million US$)	State share (%)
1	Gazprom	46660	38.0	1	Gazprom	236187	50.1
7	RAO UES	10884	53.8	2	Rosneft	92968	84.6
9	Sberbank	7431	60.6	4	Sberbank	51058	60.6
15	Mosenergo	3220	95.3	9	Gazprom Neft	22787	73.7
21	Rostelekom	1469	50.7	12	Vneshtorgbank (VTB)	18823	77.5
22	Uralsvyazinform	1153	57.8	15	RusHydro	16738	60.4
23	Aeroflot	1142	51.2	22	Rostelekom	8349	50.7
25	Rosneft-Purneftegaz	1015	82.0	23	Unified National Electric Grid (FGC UES)	6377	77.7
33	Volga Telecom	679	51.0	26	Bank of Moscow	5531	44.0
34	Bashneft	664	63.7	32	Mosenergo	4043	60.5
	Market capitalization of ten largest SOEs	74317			Market capitalization of ten largest SOEs	462861	
	Total market capitalization	237014			Total market capitalization	975098	
	Share of ten largest SOEs (%)	31.4			Share of ten largest SOEs (%)	47.5	

Notes: (1) State control is defined by either a majority ownership stake or a majority of state representatives at the board of directors. The numbers for the state share refer to control rights. Example: Gazprom is controlled by the state, and holds 73.7 per cent of Gazprom Neft at present. Therefore, the state controls 73.7 per cent of Gazprom Neft. (2) The list of the 200 largest companies by market capitalization was compiled by the Expert Rating Agency. The total market capitalization is the sum of the market capitalizations of the 200 companies in the list, which embraces at least 95 per cent of the stock market. The data on ownership stakes is from company websites, annual and quarterly reports, Troika Dialog (2008), and Troika Dialog, Risk Profiles of Russia's Largest Companies, October 2004.

82. More detail on ownership stakes of the government in listed companies is provided by Table 16, which compares the market capitalization of the largest SOEs in 2004 and 2008. The data are based on the ranking of the 200 largest Russian companies compiled by the Expert rating agency. The table also shows the size of the stake held by federal and regional governments, either directly or indirectly via other SOEs.[38]

83. According to the calculation at the bottom of Table 7, the fraction of total market capitalisation accounted for by the ten largest SOEs account for has increased from 31 to 48 per cent. These numbers are even higher than the ones from Troika Dialog cited above. Moreover, as the tables include only the largest ten SOEs the estimate is clearly below the total state ownership in the stock market. Furthermore, there are SOEs holding a minority stake in some of the 200 largest Russian companies. For example, in 2008 Gazprom owns a 19.3 per cent stake of Novatek, and the Tatarstan regional government owns 32 per cent and a golden share in Tatneft.

[38] In almost all cases the ultimate owner is the federal government. Regional governments own large stakes in the Bank of Moscow and Bashneft, and both the federal and Moscow City government own a majority in Mosenergo.

84. The sectors with the highest share of the state in listed companies are banking (64 per cent); manufacturing (53 per cent); oil and gas (47 per cent); telecoms (47 per cent); utilities (37 per cent) and transport (30 per cent). One should note that the fuel industry (mostly oil and gas) alone accounts for more than 50 per cent of the market capitalization. The state shares in oil and gas and manufacturing were increasing over the last three years (oil and gas from 32 to 47 per cent and manufacturing from 12 to 53 per cent), while the share in the utilities sector has shrunken from 52 to 37 per cent due to the reorganization of RAO UES.

5.6 Summing up

85. In sum, the aggregate data on the number of firms, employment, fixed assets, capital investment, and industrial production all show a declining role of the state in the Russian economy. This may seem surprising, given a widespread perception that the Russian government has taken a more active stance in the Russian economy in recent years. However, what has been observed over the last decade results from the combination of a broad trend toward public sector disengagement and a marked compositional change within the SOE sector. The facts are:

- SOEs taken as a whole accounted for a share of the Russian "institutionalised economy" (essentially the total economy minus general government and self employed persons) in 2008 estimated at around 30 to 40 per cent. This is markedly lower than ten years previously when, according to methodology, SOEs still accounted for at least two thirds of the economic activity.

- The sectoral distribution of SOEs' share of total economic activity is uneven. For example, the state has divested more actively in the manufacturing than the financial sector. Close to half of all banking remains in state hands. In the energy sector there has even been an increasing share of state ownership in recent years.

- The weight of SOEs in Russian stock markets is very large, and increasing. Prior to the current financial crisis SOE accounted for close to half of the total market capitalisation. This represents a marked increase over earlier years, owing to privatisation, the high valuation of energy groups and recent re-nationalisations.

6. Brazil[39]

86. The Brazilian SOE landscape has long historical roots. During the decades that followed the Second World War large-scale public ownership in the productive sectors was built up, mostly motivated by national economic development strategies. The SOEs were also used extensively for macroeconomic policies purposes. Pinheiro (2002) observed: "The macroeconomic imperatives – in particular, the foreign exchange crisis – were to have two additional effects on the SOEs. Before the foreign debt crisis (1982), the SOEs were led to contract foreign loans beyond their needs, as a way to finance the country's growing current account deficit… Further, since 1975 the prices of goods and services produced by the SOEs had been reduced in real terms, initially to control inflation and, after 1982, to subsidize manufacture exports."

87. A sequence of fiscal crises in the 1980s forced the government to reduce its weight in the economy (which had by some measures grown to 40 per cent of which SOEs accounted for more than 25 per cent) and a first large-scale privatisation programme was embarked upon in the early 1980s. In the 1990s, the privatisation process returned in strength. Some large companies were privatized *en bloc*, such as Companhia Vale do Rio Doce, Embraer and Banespa. Others had to be split up (e.g. Telebrás and Eletrobrás) to facilitate the participation of private investors.

[39] This section synthesises the analysis of Higa (2008).

6.1 What are SOEs?

88. The Brazilian Government Administration is commonly divided into two groups, namely Direct Administration and Indirect Administration. Indirect Administration consists of entities which have their own legal identity and are responsible for executing activities that could be developed in a decentralised way. It is within this category that SOEs are found. In general, Indirect Administration's entities are linked to a branch ministry. For instance, Petrobras and Eletrobrás are linked to the Ministry of Mining and Energy and BNDES to the Ministry of Development, Industry and Foreign Commerce. Indirect Administration consists of the following entities:

a) *Autarquias*[40] (Independent Agencies). Created by specific law to execute typical activities of Public Administration, which are easier to be done in a decentralized form. They have juridical personality of public law and their own revenues and capital. Many universities, technical centre of studies and even regulatory agencies were created as autarquias' form. Examples includes INSS (the National Institute of Social Security); the Brazilian Central Bank; and Agência Nacional de Petróleo (a regulatory agency for the oil sector).

b) *Public Foundations.*[41] Non-profit entities with juridical personality of public or private law. They have administrative autonomy, with its own capital, but their expenditures are fully financed by government resources. Examples include IPEA (Institute for Applied Economic Research); IBGE (Brazilian Institute of Geography and Statistics) and ENAP (National School Foundation of Public Administration)

c) *State-owned Enterprises.* Entities with a juridical personality according to private law. They have its own capital and were created to explore certain economic activity. Examples include ECT (Brazilian Postal Services Company) and EMBRAPA (Brazilian Agricultural Research Corporation).

d) *Mixed-capital companies.* Entities with a juridical personality according to private law, which pursue specific economic activities as publicly-held companies while still controlled by the government.

89. In national accounts statistics, the statistical agency IBGE classifies as non-financial SOEs[42] (whether controlled by federal, state or local government) entities that have more than 50 per cent of their revenues from sales to the general public. The classification is not related to the juridical personality of the enterprise. Moreover, a financial SOE is any government controlled entity whose main activity is to obtain and redistribute financial reserves and cover risks on behalf of the general public. Conversely, IBGE classify the following entities as Public Administration:

- Governmental entities of central administration and decentralized entities, such as independent agencies (*autarquias*), foundations and funds at federal, state and local levels.

- Public entities legally formed as enterprises with governmental functions which resources came, in most part, from transfers or services sold to governmental entities.

- Entities that have as main source of revenues taxes, such as SESC, SESI, SENAI, among others.

[40] A list of federal's *autarquias* is presented in the Annex II.

[41] A list of federal's public foundation is presented in the Annex III.

[42] A complete list of Federal, State and Local SOE classified by IBGE is presented in Annex IV.

90. In the remainder of this section IBGE's definition is, where feasible given data limitations, applied. An important caveat needs to be mentioned here: all pension funds are classified as private institutions in Brazil. Even those whose boards are appointed the government are treated as being "private". They follow specific laws and rules (CMN 3.456 and CVM 459 as examples) which effectively limit the degree of government control over their operations. They are able to buy securities in the secondary market, to participate in IPO's or in real estate businesses. Because of their available cash, they had an important role in the privatization process, buying portions of almost all privatized companies.

6.1.1 Data sources and definitions

91. It is notoriously difficult to find aggregated information regarding state and local SOEs. The main source of this information is IBGE, whose last Public Finance Study appeared in 2003. The main other source of information is the publications of the Department of Public Enterprises Coordination and Control of Ministry of Planning (DEST), a coordinating state agency that deals only with SOEs at the federal level.

92. According to DEST's relatively narrow definitions, SOEs are entities that are subject to ordinary corporate law – hence from a legal perspective treated like private enterprises – and at the same time subject to state control, including some of the rules applied to the public administration. Federal SOEs are divided into two main groups: non-financial enterprises and financial enterprises. Non-financial SOEs explore productive economic activities, in sectors like transportation, services, and raw materials, among others. Financial SOEs, whose operations follow the Law n. 4.595/64 and the rules and controls of Brazilian Central Bank.

93. IBGE also separates SOEs into non-financial enterprises and financial enterprises. In 2003, the first group contained 257 non-financial enterprises of federal, state and local level. The second group comprised 46 financial institutions at all levels of government – including federal banks such as Banco do Brasil; Banco Central do Brasil; Caixa Econômica Federal; Banco Nacional de Desenvolvimento Econômico e Social (BNDES); Banco da Amazônia and Banco do Nordeste do Brasil.

6.2 Weight of SOEs in the Brazilian economy

94. In Brazil, the main SOEs are the federal ones, such as Petrobras, Eletrobrás, BNDES, Banco do Brasil, Caixa Econômica Federal. The state and local SOEs, while plentiful in numbers, have a lower weight in the Brazilian economy. Moreover, the difference between federals and others seems to be growing. Federal SOEs were responsible for 90 per cent of the total revenues received by total SOE in 2005. Seven years earlier federal SOEs accounted for just over three fourths of revenues. For this reason, the fact that some of the following sections have to rely on federal statistics only is not seen as critical to the conclusions of this paper.

6.2.1 Large SOEs relative to other large companies

95. During the 1980s – i.e. before the intensive process of privatization – SOEs represented one third of the 500 largest Brazilian enterprises (Table 17). Moreover, as pointed out by Pinheiro and Oliveira Filho (1991), "… in 1989, 8 from 50 enterprises with the biggest revenues, 17 from 20 enterprises with the biggest equities and half of 20 companies more profitable were SOEs… While the 500 biggest enterprises employed 2 million workers, the 50 biggest SOE were responsible alone from 650 thousands of employments. Finally, the SOEs responded, in 1987, for around 17 per cent of the total investment". Since the middle of the 1990s, privatization led to a significant decrease in the number of large SOE. According to the most recent figures there are now "only" 39 SOEs among the 500 largest enterprises in Brazil.

Table 17. 500 Largest enterprises by ownership (absolute number)

Year	Private		State-owned
	Foreign	Domestic	
1980	162	180	158
1989	154	220	126
2007	201	260	39

Source: Exame Magazine and Pinheiro and Oliveira Filho (1991)

96. Additional light is shed on the relative importance of large SOEs by comparing companies sales rather than number. The share of SOEs in the total sales of the 500 largest enterprises decreased in the 1990s, again due to the privatization process (Table 18). Recent increases in the SOE share are almost entirely due to the performance of the Petrobras Group. Petrobras is the largest SOE as well as the largest company in Brazil and it is followed in the league table by BR Distribuidora, one of its affiliates. In 1995, Petrobras and BR Distribuidora were responsible for 38 per cent of the total SOE sales; in 2007 their share had risen to 57 per cent.

Table 18. Share of foreign, domestic and state-owned enterprise in total sales (500 largest enterprises)

Year	Ownership:		
	Foreign	Domestic	State-owned
1995	33.8	42.6	23.6
1998	44.1	38.9	17.0
2002	43.6	37.3	19.1
2007	42.0	37.0	21.0

Source: Exame

6.2.2 Weight of non-financial SOEs in the overall economy

97. There are no official estimates of the share of SOEs in the overall economic activity in Brazil. The closest proxy is IBGE's data (last released for 2003) of the share of non-financial SOEs in the production and value added of the overall non-financial enterprise sector (Table 19). It appears that despite privatizations (plus a temporary upset at the time of the 1999 financial crisis), SOEs' share of output and value added has only receded slightly. By both measures SOEs continue to account for close to 10 per cent of the economic activities of the non-financial companies in Brazil.

Table 19. Value added and production by non-financial companies

	Total Value	Ownership (%)		
	(US$ Million)	Total	Private	Public
1995				
Production	626,582	100.0	90.7	9.3
Value added	285,531	100.0	88.7	11.3
1999				
Production	966,393	100.0	93.0	7.0
Value added	420,148	100.0	90.8	9.2
2003				
Production	1,810,294	100.0	92.3	7.7
Value added	718,607	100.0	89.1	10.9

Source: IBGE

98. The effects of privatisation have been more noticeable in the share of SOE in fixed investment (Table 20). In 1995, public companies investments were responsible for 9.9 per cent of the total gross capital formation; in 2003 their participation had decreased to 6.4 per cent. It bears mentioning that this figure may be the one estimate that comes the closest to assessing SOEs weight in the overall economy: the investments included in Table 20 are not limited to the corporate sector. They include everything from housing, to agriculture, to public administration – out of which SOEs still accounted for more than 6 per cent five years ago.

Table 20. Participation of public and private sector in investment

	1995	1999	2003
Gross capital formation (% total)	**100.0**	**100.0**	**100.0**
Public sector	21.3	15.0	15.0
Public administration	11.4	8.6	8.6
Public companies	9.9	6.4	6.4
Private sector	78.7	85.0	85.0

Source: Afonso, Araújo and Biasoto Jr. (2005)

6.2.3 Importance of financial SOEs: The Brazilian banking system

99. The stabilisation process that followed the so-called Real Plan in 1994 led to considerable consolidations in the Brazilian banking sector. In particular, many banks previously owned by states were taken over by the federal level of government. Some of them were subsequently privatized, but financial SOEs have retained an important role in Brazilian economy, with the continued presence of large banks, such as BNDES, Banco do Brasil and Caixa Econômica Federal – all of which federally owned.

100. That said, the share SOEs in the banking sector has decreased between 1995 and 2007 in terms of assets (Table 21), equity and deposit taking. The share of bank assets held by SOEs declined from 58 per cent in 1995 to 37 per cent in 2007. At the same time, the shift between the federal and sub-national levels is very visible in the table. The federal share of banking declined only somewhat (and, not shown in Table 11, the federal banks' share of total deposits has actually remained largely unchanged since 1995) whereas the states' involvement has been reduced by three fourths. The federal banks Banco do Brasil and Caixa

Econômica Federal figure at the top 5 rank of Brazilian Banks by total assets and they are responsible for almost one third of the total deposits.

Table 21. Brazilian banking sector: Assets by owner type (US$ Million)

Year	Federal		State		Brazilian private		International control		International participation		Total	
1995	217,247	41.2%	86,865	16.5%	142,189	27.0%	38,414	7.3%	42,306	8.0%	527,022	100%
2000	194,075	42.0%	17,523	3.8%	108,787	23.6%	108,532	23.5%	32,653	7.1%	461,570	100%
2007	440,215	33.6%	49,246	3.8%	441,807	33.7%	305,692	23.3%	75,004	5.7%	1,311,964	100%

Source: BACEN

6.3 Sectoral distribution of SOEs

101. The most meaningful analysis of the sectoral distribution of SOEs would normally focus on value added and production values, akin to the above Table 19. However, the production of such data was discontinued after 1999. Currently, the strongest indication of the relative importance of SOEs in the sectors mining, manufacturing industry, public utilities, energy, transportation, communication, financial services, trade and "others" are provided by IBGE's breakdown of the revenues earned by SOEs. These data are available at both the federal and the sub-national levels (Table 22).

102. The most important sector in revenue terms for the federal SOEs is financial services, due again to the great importance of a couple of state-owned banks. Regarding manufacturing industry, the relatively high share of revenues is largely due to the economic performance of Petrobras. The share is estimated to have grown considerably following the termination of the data in 2003. SOEs owned by state and local authorities are mostly concentrated in the "traditional" network industries – i.e. public utilities and energy, which in 2003 accounted for more than two thirds of total revenues. Despite its decline over the last decade the financial services remain the third most important activity for SOEs at the sub-national level of government.

103. DEST provides a sectoral breakdown of federally owned SOEs according to their share of total SOE employment. Broadly consistent with Table 12 these figures have the financial sector in first place, with almost 40 per cent of all Brazilian SOEs employees. Conversely, the second most important sector in terms of employment is communications which currently employs 25 per cent of all SOE staff. The dominant company in this sector is the Brazilian Postal Services Company.

Table 22. Total revenues of SOEs by economic activity (%)

	1998	2000	2003
Federal level of government:			
Mining	0.2	0.3	0.0
Manufacturing industry	15.5	29.7	19.6
Public utility services	0.1	0.1	0.0
Energy	6.4	8.5	5.7
Transportation	2.4	1.9	0.9
Communication	1.7	1.9	1.2
Financial	66.3	47.3	66.5
Trade	5.8	8.3	5.4
Other	1.7	2.1	0.7
Total	100.0	100.0	100.0
State and local levels of government:			
Mining	0.1	0.1	0.1
Manufacturing industry	0.0	0.0	0.0
Public utility services	17.1	16.7	26.3
Energy	32.1	25.9	42.8
Transportation	3.0	2.8	4.3
Communication	0.0	0.3	0.5
Financial	44.6	51.3	22.3
Trade	0.5	0.6	0.8
Other	2.6	2.4	2.9
Total	100.0	100.0	100.0

Source: IBGE

6.4 Listed SOEs

104. Currently, the SOEs account responsible for 25 per cent of the total market capitalization of the companies listed in Bovespa (Brazilian Stock Exchange). Petrobras is the biggest listed company (including SOEs and privately owned companies combined) followed by Vale do Rio Doce, Bradesco, Itaú and Banco do Brasil. Petrobras has alone more than 16 per cent of the total market capitalisation. Among the SOE listed companies, Petrobras, Banco do Brasil and Eletrobrás are the three largest SOE by market capitalization and represent 21.2% of the total market capitalization of the listed companies (Table 23).

105. Among the 26 SOEs with stocks traded in Bovespa, 9 are controlled by federal government and 17 by states. As for the sectoral composition, in terms of numbers the vast majority are either banks (11 out of 26) or in the power sector (9 out of 26).

106. The weight of SOEs on the stock market has declined following the complete privatisation of a number of large companies. Bovespa Index or Ibovespa is the main indicator of the Brazilian Stock Exchange, reflecting the value of Bovespa's most traded stocks (80 per cent of totals) in the form of a theoretical portfolio. In the beginning of 1995, 79 per cent of Ibovespa consisted of SOE stocks. For instance, Telebrás – the company responsible for the telecommunications segment – represented 31 per cent, followed by Eletrobrás and Petrobras. Ten years later, in the beginning of 2005, the participation of SOEs stocks at Ibovespa had been reduced to 24 per cent. The sell-off of Telebrás and Eletrobrás affiliates and Vale do Rio Doce were the main driving forces behind the decline.

Table 23. Market capitalisation of SOEs with stocks traded on Bovespa, mid-2008 (US$ Million)

	Companies	Segments	Market Value
1	PETROBRAS	Exploration and refining oil	227 102
2	BANCO DO BRASIL	Banks	40 730
3	ELETROBRÁS	Electric utilities	21 368
4	CEMIG	Electric utilities	11 085
5	SABESP	Water utilities	5 651
6	CESP	Electric utilities	5 607
7	CASAN	Water utilities	5 605
8	COPEL	Electric utilities	5 536
9	BANCO NOSSA CAIXA	Banks	2 838
10	BANRISUL	Banks	2 230
11	COPASA	Water utilities	2 153
12	BANCO NORDESTE DO BRASIL	Banks	1 940
13	BANCO DA AMAZÔNIA	Banks	1 286
14	CELESC	Electric utilities	1 185
15	BESC	Banks	1 144
16	SANEPAR	Water utilities	726
17	BANESTES	Banks	670
18	CELGPAR	Electric utilities	472
19	BANCO DO ESTADO DO PIAUÍ	Banks	371
20	EMAE	Electric utilities	313
21	LIGHT PARTICIPAÇÕES	Electric utilities	282
22	BANCO DE BRASÍLIA	Banks	242
23	CEB	Electric utilities	219
24	BANCO DO ESTADO DE SERGIPE	Banks	140
25	BANCO DO ESTADO DO PARÁ	Banks	72
26	TELEBRÁS	Others	66
	Subtotal – SOE		**339 048**
	SOE Participation		**24.8%**
	Total (398 companies)		**1 365 112**

Source: Bovespa

6.5 Summing up

107. It must first be recognised that the statistical coverage of SOEs in Brazil is much sparser than in the other BRIC countries. Several data collection exercises were discontinued some years ago by the statistical authorities, apparently reflecting a lower priority given to the sector after years of major privatisations. The changing weight of SOEs in the Brazilian economy can therefore not be tracked with any great degree of precision. Nevertheless, the following observations suggest themselves:

- Estimates of SOEs' weight in the total economy are available only in the form of their share of total gross capital formation. In 2003 it was 6 per cent, down from 10 per cent in the mid-1990s.

- The share of SOEs in the value added of the Brazilian non-financial corporate sector was most recently around 11 per cent – a level that has remained almost unchanged since the mid-1990s. SOEs in the financial sector apparently play a bigger role. State-owned banks in 2007 accounted

for more than 37 per cent of total banking assets. This is a large share by international comparison, but well below the 58 per cent recorded in 1995.

- Publicly listed SOEs' share of stock market capitalisation is quite significant; it currently stands around 25 per cent. However, this is sharply lower than their share in 1995 (which by some measures was three times higher), and largely attributable to the dominant size of Petrobras.

7. India[43]

7.1 What is an SOE?

108. India is a union of states. It has a three tier administration stretching from the central government and the state governments to the local level governments. The Indian Constitution describes the powers of the central and the state governments through the central, state and the concurrent lists. There is no description of powers assigned to the local level governments. In the case of any rift between the central and the state governments on the interpretation of provisions contained in the concurrent list, the powers of the central government override the powers of the state governments.

109. The 93rd Amendment in the Indian Constitution has gone a long way in recognizing the responsibilities of the local level governments by identifying 29 subjects the administration of which has become their responsibility. However, this has only slightly altered the balance of economic power in the favour of the local level governments as the state governments continue to run their writ on the local level governments. This paper almost totally ignores local level enterprises due to data limitations. This is not seen as a serious omission because, again, despite the recent amendments in the Indian Constitution, most of the economic activities at the sub-national levels remain governed by the states.

110. At any level of government an SOE can take several specific forms. The organisational forms are denoted throughout this paper by their Indian names rather than their equivalents in OECD-speak. The main forms are[44]:

- *Government companies*. This is the main kind of SOEs in India today. A government company, according to the Indian Companies Act, 1956 is one in which not less than 51 per cent of the paid-up share capital is held by the central government or by the state governments.

- *Public corporations*. A public corporation is an SOE set up under a specific enactment by the central or the state governments. Their equivalent in OECD countries would be statutory corporations.

- *Departmental enterprises*. A departmental enterprise is an enterprise set up by the central or the state governments to carry out an economic activity controlled by a ministry itself, a ministerial department or by an inter-departmental committee/board. Their equivalent in OECD countries would be quasi-corporations.

- *Public sector banks* and *public sector financial institutions*. Government owned banks are kept separate in Indian documentation from public corporations *inter alia* because they are subject to a separate legislation, namely The Banking Companies (Acquisitions) Act and the Banking Companies Act of 1949. Public sector financial institutions do not include public sector banks.

[43] This section synthesises the analysis of Mishra (2008).

[44] In addition, regulatory authorities related to network industries, finance, etc. are also regularly cited in India as a type of SOEs.

Mostly they are engaged in providing long-term finance or refinancing institutions lending to industries.

- *Co-operative societies.* Co-operative entities involved in business in India are, insofar as they are established pursuant to some policy objective, considered as SOEs.

- *Autonomous bodies.* An important instrument for public authorities is autonomous bodies set up as societies under the various ministries to promote designated objectives.

- *Trusts.* Public trusts form of organization is generally an SOE holding assets of the central or the state governments in trusts. The central government has 199 major and minor ports established under the Indian Port Trusts Act 1908.

- *Deemed government companies.* Deemed government companies are SOEs covered by the Indian Companies Act having a majority stake of the central government in their equity but managed by the private sector. There are such 68 companies.

7.2 SOE data in overview

111. Table 24 presents the consolidated position of SOEs in terms of their numbers, form of organisation and investment. The table demonstrates that the maximum number and investment in SOEs belong to the government companies followed by public sector banks and departmental enterprises. A crucial separation here is between the centrally-owned SOEs (CSOEs) and the state-level SOEs (SLSOEs). Table 1 demonstrates how the vast majority of SLOEs are fully incorporated enterprises, almost half of the CSOEs are characterised as "autonomous bodies". All the 30 public sector banks and financial institutions in India, as well as the "deemed enterprises" managed by the private sector, are held at the central level of government. Conversely, the states have retained a much larger number of semi-incorporated SOEs such as public corporations and departmental enterprises than the central government, which has as mentioned earlier busied itself corporatising such entities.

Table 24. Consolidated position of SOEs in terms of their numbers, form or organsation and investment as on 31st March 2006

Particulars	Government Companies	Public Corporations	Departmental Enterprises	Public Sector Banks and Financial Institutions	Regulatory Authorities	Autonomous Bodies	Deemed Companies	Cooperative Societies	Total Number	Total Investment
CSOEs	217	1	2	30	5	241	68	12	576	482544
SLSOEs	822	59	43	0	20	0	0	118	1042	259184
Total	**1039**	**60**	**45**	**30**	**25**	**241**	**68**	**130**	**1618**	**741728**

Source: Institute of Public Enterprise Database and Ministry of Heavy Industries Public Enterprises (Government of India, New Delhi), Public Enterprise Survey.

112. Table 25 synthesizes the number of, and investment in, the central and the state level government companies taken together for the period 1993-94 to 2005-06. (Here and in the following the word "investment" signifies the sum of pledged and paid up equity capital and long-term loans to SOEs.) The table demonstrates diverging trends at different levels of the administration: the central government has reduced its number of SOEs, whereas the states have added a significant number of SLSOEs to their portfolios. That said, the investment at the central government level has actually increased briskly since

1993 and the central government still accounts for about two thirds of the value of the relevant SOE investments.

Table 25. Number and investment in the government companies (In Rs. billion)

	CSOEs:		SLSOEs:		Total:	
Year	Number	Investment	Number	Investment	Number of government companies in India	Investment in all government companies in India
1993-94	240	1630	749	1117	989	2748
1995-96	239	1631	749	1363	988	2994
1998-99	235	2802	875	1978	1110	4780
2001-02	231	4143	1042	2801	1273	6944
2004-05	227	4265	1042	2591	1269	6857

Source: Institute of Public Enterprise Database and Ministry of Heavy Industries Public Enterprises (Government of India, New Delhi), Public Enterprise Survey.

7.3 Weight of SOEs in Indian economy

7.3.1 Share of SOEs in GDP

113. The impact of the government policy of gradual reduction of dependence on the public sector is discernable from Table 26 showing the decline of the contribution of SOEs to the GDP and also their contribution within the ambit of the public sector. On the whole, the table tells the story that, on the one hand, the public sector has lost ground in terms of GDP share and, on the other, SOEs have lost ground vis-à-vis other parts of the public sector. That said, the changes are not huge. The share of SOEs in the GDP declined from 17.5 per cent in 1993-94 to 13.2 per cent in 2006-07. The share of public sector GDP generated by SOEs declined from 68.3 per cent in 1993-94 to 61.5 per cent during 2006-07.

Table 26. Share of SOEs in GDP (In Rs billion)

Years	GDP all India	Total GDP of public sector	GDP of SOEs	Share of SOEs in GDP: (3)/(1)	Share of SOEs in public sector GDP: (3)/(2)	Share of SOEs in productive economy: (3)/[(1)-(2)+(3)]
	(1)	(2)	(3)	(4)	(5)	(6)
1993-94	7921	2025	1383	17.5	68.3	19.0
1997-98	14019	3525	2336	16.6	66.2	18.2
2000-01	17865	4656	2786	14.4	59.8	17.4
2003-04	22614	5852	3584	14.1	61.3	17.6
2006-07	37900	8123	4992	13.1	61.5	14.4

Source: Ministry of Statistics & Programme Implementation,(Government of India, New Delhi) National Accounts Statistics, Central Statistical Organisation

7.3.2 Share of SOEs in employment

114. Table 27 shows that the employment in SOEs is on decline, which is through to reflect the government's policy of labour adjustment and rationalisation. As explained earlier, deregulation and privatisation have halted the buoyant growth of public enterprises resulting in reduction in employment. A study of employment in the public and the private sectors show that the public sector payroll has been reduced from 19.5 million people in 1994 to 18.0 million people in 2005. Importantly, however, according to Indian statistical definitions Table 27 includes only employees of "organised sectors", hence excluding

the majority of Indians who are self-employed, involved in farming and other primary sectors or informally employed. The relative decline was largest in the SOE sector, which saw employment drop by 740,000 people over the twelve year period. Employment in private sector companies increased from 7.9 million in 1994 to 8.5 million in 2005.

Table 27. Employment in public enterprises, public sector and private sector (In million persons as of 31 March)

Years	Public enterprises	General government	Private sector
1993-94	6.49	12.84	7.85
1996-97	6.46	12.97	8.51
1999-00	6.39	13.03	8.70
2002-03	6.02	12.75	8.43
2005-06	5.75	12.26	8.45

Source: Ministry of Finance (Government of India, New Delhi), Economic Survey: 2007-08, February, 2008,p.A-52

7.3.3 Economic weight of SOEs, by sectors

115. The sectoral contribution of SOEs in India's GDP shows that they have a very formidable presence in electricity, gas and water supply sector with nearly 90 per cent contribution in 1993-94 which declined to 68 per cent in 2005-06. The monopoly position of SOEs in many areas of the economy was responsible for this phenomenon. The economic liberalisation and privatisation have opened up the new avenues for setting up private enterprises in this sector which has resulted in the decline in the contribution of this sector. The community, social & personal service SOEs followed suit with 62 per cent in 1993-94 which declined to 48 per cent in 2005-06.

116. The welfare enterprises at the central and the state levels were responsible for their strong presence. The transport, storage & communication sector SOEs were third in ranking as SOEs in this sector enjoyed for very long period a monopoly position and have been exposed to competition only with the initiation of new economic policy in 1991. The manufacturing sector SOEs and banking, insurance, real estate & business services vied with each other neck to neck and saw the decline in their contribution over the study period. The contribution of agricultural and construction sector SOEs was 4 ½ percent and 6 per cent in 1993-94 respectively, which declined to 3 and 7 per cent during 2005-06 respectively. To conclude, all the sectors showed the tendency of a decline in the contribution of the public sector (Table 28 A&B).

Table 28A. Contribution of SOEs to GDP, by sector (In Rs. billion)

	GDP of agriculture SOEs	GDP of agriculture	% share of SOEs in total agriculture GDP	GDP of manufacturing SOEs	GDP of manufacturing	% share of SOEs in manufacturing GDP	GDP of utilities[45] SOEs	GDP of utilities	% share of SOEs in utilities GDP	GDP of construction SOEs	GDP of construction sector	% share of SOEs in construction GDP
1993-94	102	2291	4.46	446	1254	35.62	181	200	90.51	23	392	5.90
1996-97	136	3450	3.95	550	2207	24.93	353	376	93.89	38	603	6.40
1999-00	170	4465	3.83	716	2641	27.13	449	486	92.31	163	1020	16.06
2002-03	176	4720	3.73	755	3460	21.83	466	545	85.50	166	1351	12.30
2005-06	188	6158	3.06	738	5193	14.22	436	646	67.73	192	2646	7.28

Source: Ministry of Statistics & Programme Implementation (Government of India, New Delhi), National Accounts Statistics: 2007-08, p27, 159

Table 28B. Segmental Contribution of SOEs in India's GDP

	GDP of transport, storage & communication SOEs	GDP of transport, storage & communication	% share of SOEs in transport, storage & communication GDP	GDP of banking insurance, real estate & business services SOEs	GDP of banking insurance, real estate & business services	% share of SOEs in banking , insurance, real estate & business services	GDP of community, social & personal service SOEs	GDP of community, social & personal service	% share of SOEs in community, social & personal service GDP
1993-94	291	542	53.63	257	979	26.26	642	1039	61.83
1996-97	446	880	50.73	402	1469	27.37	978	1631	59.97
1999-00	598	1333	44.84	612	2335	26.22	1794	2667	67.27
2002-03	796	1787	44.58	841	3306	25.45	1869	3342	55.94
2005-06	1085	2771	39.16	887	4525	19.62	2139	4489	47.65

Source: Ministry of Statistics & Programme Implementation (Government of India, New Delhi),National Accounts Statistics::2007-08, p27,159

7.4 Listed SOEs

117. As a part of new economic policy adopted in 1991 and owing to the introduction of corporate governance guidelines, the central government has been insisting on profitable centrally-owned government companies (CGCs – essentially the government companies segment of CSOEs other than financial institutions) for listing on stock exchanges. The Bombay Stock Exchange is the premier stock exchange in India. As on March 31, 2008 there were 46 such companies listed in the Bombay Stock Exchange (BSE). However, the data of market capitalisation for only 41 enterprises figure in the study as the shares of five CGCs have not been traded.

[45] "Utilities" here means electricity, gas and water.

118. Besides the CGCs, a number of public sector financial institutions are also listed. The BSE being the premier stock exchange, these financial institutions too have been listed on the BSE. These financial institutions include many development banks engaged in long term financing and commercial banks engaged in short term lending. For the purpose of this study, the market capitalisation of 17 PSFIs listed on BSE has been studied for the period of 1993-94 to 2007-08. The scope of PSFIs include commercial banks, development banks, merchant banking companies, financial companies, and those housing finance companies whose shares are held by the public sector banks.

119. Table 29 shows that the overall average contribution of the CGCs and the PSFIs to the market capitalisation in BSE was 22 per cent in 2007-08. This was composed of market capitalisation of 19 per cent of the CGCs and 3 per cent of the PSFIs. During 1993-94, the overall average contribution of the CGCs and the PSFIs to the market capitalisation in BSE was 21 per cent. This was composed of market capitalisation of 18 per cent of the CGCs and 2 per cent of the PSFIs. Hence, the overall weight of CGCs in capital markets has remained almost unchanged, as pricing changes and additional IPOs of state-owned enterprises have held pace with the increases in the private segments of the stock market listings.

Table 29. Comparison of contribution by PSFIs, CGCs and total contribution of public sector to BSE market capitalisation

Years	BSE Market Cap.	CGC Contribution	PSFIs Contribution	Total Contribution by CGCs and PSFIs	Total Contribution by CGCs and PSFI	CGCs Contribution	PSFIs Contribution
	In Rs. billion				In Percent		
1993-94	3680	677	83	760	20.67	18.4	2.27
1996-97	4639	1240	235	1476	31.82	26.75	5.08
2001-02	6122	1188	169	1357	22.18	19.41	2.77
2004-05	16984	4189	780	4970	29.26	24.67	4.59
2007-08	52967	10115	1742	11858	22.39	19.1	3.29
Average	**13584**	**2675**	**470**	**3146**	**23**	**19.57**	**3.34**

Source: Centre For Monitoring Indian Economy Pvt Ltd (CMIE), database for the years 1993-94 to 2007-08

7.5. Internationalisation of SOEs

120. In the era of globalisation, the central government is pursuing vigorously the policy of the internationalisation of SOEs by granting autonomy to them to make investments abroad and form joint ventures. There is an increasing emphasis on securing higher export earnings from these enterprises. Many of these enterprises have been permitted to mobilise funds from abroad through various instruments. Some enterprises have done exceedingly well in expanding their international operations.

7.5.1 Performance of CSOEs with regard to foreign exchange earnings

121. Table 30 depicts the foreign exchange earnings of these enterprises. The foreign exchange earnings have fluctuated in the region of the lowest 4.3 per cent in the year 2001-02 to the highest 7.5 per cent in 1993-94. A majority of the foreign exchange earnings came from the export of goods. It is clear that the accent on foreign exchange earnings is very low and there is a need to prop up such earnings through a well thought out strategy. It may be noted that the investments made by these enterprises are very marginal which is supported by the fact that the interest and dividend earnings have turned out to be insignificant.

Table 30. Foreign Exchange Earnings of CSOEs

Years	Export of goods on FOB basis	Royalty, know-how, professional and consultancy fees	Interest and dividend	Other income	Grand total	Turnover	Foreign exchange share as percentage of turnover
1993-94	78	40	0	0	118	1580	7.51
1997-98	162	1	2	39	204	2760	7.42
2000-01	206	1	4	37	247	4582	5.41
2003-04	329	2	5	13	349	6307	5.53
2006-07	544	11	1	81	638	9644	6.62

Source: Ministry of Heavy Industries & Public Enterprises, (Government of India, New Delhi), Public Enterprise Survey:2007-08

7.5.2 Mobilisation of foreign financial resources

122. The mobilisation of financial resources from international capital markets may serve as a significant parameter for measuring the degree of internationalisation of a firm. It is worth mentioning that shares of Mahanagar Telephone Nigam (American Depository Receipts) are listed in New York Stock Exchange. GAIL Ltd. and the Steel Authority of India (Global Depository Receipts) are listed on London Stock Exchange. CSOEs raised Rs.301 billion, Rs.325 billion and Rs.426 billion in foreign capital markets during 2004-05, 2005-06 and 2006-07, respectively. As noted earlier, some CSOEs are very active on the internationalisation front. A large number of CSOEs have to catch up with them. An effort is made to describe briefly the international operations of some of the CSOEs.

7.5.3 Examples of the internationalisation of selected CSOEs

7.5.3.1 Bharat Heavy Electricals Limited (BEHL)

123. BEHL expanded its international operation through entering new markets and building up on existing ones. During the year 2006-07, the exports by BHEL went up to Rs.11 billion. The company, moreover, booked export orders worth Rs.19 billion in comparison to an average yearly order book of Rs.13 billion during the last five years. Export orders received during the year include countries like France, Sweden, Bangladesh, Jordan, Oman, Tajikistan, Egypt, Afghanistan, Ethiopia, Sudan and Nepal. The continued focus on After-Sales Services led to several orders for spares and services from Oman, Indonesia, Kazakhstan, Germany, Libya, Philippines, Surinam, Malaysia, and Sri Lanka. The Company received orders during the year for power equipments for over 900 MW of power plants and for 5600 MVA of transformer capacity from over ten countries.

124. In the area of overseas project execution, a significant landmark was achieved with the commissioning of the remaining two gas turbine generating units at the 600 MW Western Mountain Project in Libya. The company also successfully supplied and commissioned 1x25 MVA & 1X15 MVA transformers for NVEBS Surinam. The largest single phase transformer bank of 405 MVA capacity with 3 x 135 MVA single phase transformers in Zambia was also commissioned during the year. Over the next five year period, BHEL aims to increase exports by six times from the current levels. Investments abroad through Merger & Acquisition (M&A) route will also be explored for growth opportunities in order to enlarge its operations both in India and abroad.

7.5.3.2 Engineers India Limited (EIL)

125. EIL provides various services in India and abroad mainly in the field of engineering which inter-alia include petroleum refineries, pipeline, oil & gas processing, petrochemicals, offshore structures & platforms, power, fertilizers and metallurgy. The company renders complete range of services needed for conceptualisation, designing, engineering and constructing of projects. EIL has served in the past, various customers in Algeria, Abu Dhabi, Australia, Papua New Guinea, Bahrain, Ghana, Iran, Kuwait, Qatar and Saudi Arabia. During the year 2006-07, engineering consultancy services was provided to Shauaiba Petrochemicals Complex, Kuwait and product storage tanks at Buipe and Bolgatanga for BOST, Ghana were completed. Other assignments are going on satisfactorily in Algeria, Kuwait and Iran. A significant new assignment secured during 2006-07 related to engineering consultancy services for an Ammonia-Urea Fertilizer Complex in Papua New Guinea. Other assignments received, during the year, are Abadan refinery in Iran and Consultancy Services in Abu Dhabi, Iran, Qatar and Kuwait.

126. The revenue generation from overseas business accounted for about 26 per cent of the total revenue from consultancy services of EIL for the year 2006-07. EIL Asia Pacific Sdn. Bhd. Is a wholly owned foreign subsidiary of EIL in Malaysia.

7.5.3.3 GAIL (India) Limited (GAIL)

127. GAIL has been going for strategic alliance with international players for technological collaboration to gain entry in international market. It entered into a MOU with Arrow Energy of Australia and Energy Infrastructure Group of Sweden for exploring Coal Based Methane opportunities in India, Australia and other countries. During the year, all the four companies in which GAIL has made investments, namely, Fayum Gas Authority, Shell CNG Egypt, National Gas Company in Egypt and China Gas holding Ltd performed well.

128. GAIL also plans to form a joint venture company with China Gas, for pursuing CNG, City Gas, CBM and other related gas opportunities in China. A joint venture agreement to this effect has been signed with China Gas. Further, discussions are on with Iran and Pakistan Governments and significant progress has already been made for brining gas from Iran to India through pipeline under a trilateral framework. GAIL is also pursuing other business opportunities in the gas sector in Australia, Algeria, Libya, Egypt, Saudi Arabia, China, Singapore and Oman. GAIL Global (Singapore) Pte Ltd is a wholly owned subsidiary of GAIL.

7.6 Summing up

129. SOEs continue to constitute an important segment of Indian economy – at both the central and state levels of government. The central SOEs are small in numbers but represent a very large equity value. The SLSOEs are more than four times the number of the Central SOEs, but in value terms they are less significant. The following observations suggest themselves:

- The share of SOEs in the Indian economy has been shrinking over the last 10-15 years, but not dramatically so. In fiscal year 2006-7 it stood at 13 per cent, down from 17.5 per cent in 1993-94. Over the same period SOEs' share of employment (in the "organised sectors") receded from 24 per cent to 22 per cent

- The sectoral composition of SOEs' economic activities is very uneven. Largest is their contribution to GDP in the utilities sector (68 per cent in 2005-6; down from 91 per cent in 1993-94), followed by community, social and personal services (48 per cent in 2005-6; down from 62 per cent in 1993-94).

- Listed SOEs' contribution to the capitalisation of Bombay Stock Exchange has remained remarkably stable over the years. In 2007-8 it was 22 per cent, almost unchanged since the 21 per cent recorded in1993-94.

- Many SOEs are on the road to internationalise their operations, but in most cases foreign operations is to date a minor proportion of their turnover. Indian SOEs have so far been more active raising financing and additional capital abroad than investing there.

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