

**Privatization in Western Europe
Stylized Facts, Outcomes,
and Open Issues**

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Privatization in Western Europe

Stylized Facts, Outcomes, and Open Issues

Summary

Privatization has certainly been one of the main events of the economic and financial history of the 20th century. Between 1997 and 2004 more than 4,000 privatization operations were carried out in the world, bringing to governments revenues for over 1,350US\$billion. Western Europe emerges as the most important region, having implemented the greatest number of privatizations and raised a half of global revenues. The relevance of Western Europe in the process can be ascribed to several factors. This paper investigates the causes of this process, summarizes the main trends of privatization activity at the country level, analyzes the main privatization drivers and provides an account of the main findings of the effects of privatization at the macro and microeconomic level.

Keywords: Privatization, State-Owned Sector, Capital Markets, Financial Development

JEL Classification: L33, L38

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1. Introduction

Started in the United Kingdom at the end of the 1970s, privatization spreads in Continental Europe during the 1980s. Western European countries, hard pressed to improve mounting fiscal deficit and to introduce major product market reforms as requisite to join the European Union, pushed ahead during the 1990s one of the most extensive and ambitious privatization programs around the world.

After more than a quarter of century, it is possible to take stock of the main national experiences, and try to draw an overarching description of what has been achieved and not achieved through such a sustained divestiture policy.

The report presents quantitative information about the size and the extent of the State sell-offs and State ownership in major European countries, and analyzes the most important stylized facts about the causes and consequences of the process.

The main findings can be summarized as follows. Privatization in western Europe has been mainly driven by fiscal conditions and by the positive outlook in financial markets. The process has also been shaped by political preferences and institutional constraints, as partisan politics and constitutional rules affected privatization choices.

As to the consequences, our knowledge about the real effects of privatization in terms of fiscal consolidation and operating efficiency of firms is more limited, even if the impact of privatization on financial market development and on the spreading of equity culture has often been dramatic.

Surprisingly, the large scale privatization process of the 1990s did not alter the prevailing corporate governance structures in privatized firms. At the turn of the century, we find European governments firmly controlling (by voting rights and golden shares) a large part of privatized companies, especially in strategic sectors. Understanding whether the coexistence of private ownership and public control is a European transient anomaly or a functional pattern of governance is important for policy reasons and might be an exciting avenue for future research.

The report is organized as follows. Section 2 reports the main trends of privatization activity; section 3 describes the emergence of the State-owned enterprise (SOE) sector; section 4 analyzes the main privatization drivers; sections 5 provides an account of the main findings on the effects of privatization at the macro and microeconomic level. Section 6 concludes.

2. Privatization trends

The first aggregation of data – referred to the global number of transactions and revenues raised in the 1977-2004 period - provides a preliminary indication of the extent of privatization in Western Europe as compared to the rest of the world.

Western Europe appears to be the area mostly involved in the process, having implemented the greatest number of privatizations (29 percent of global deals) and raised 48 percent of global revenues (see Table 1, and Figure 1).

[INSERT ABOUT HERE Table 1, and Figure 1]

In terms of percentage of global proceeds, Western Europe is followed by Asia (24 percent) and Latin America (11 percent). As to the number of transactions, privatizations sales were also numerous in Central and Eastern Europe and the former Soviet Union (28 percent) but limited in size (representing only 6 percent of global revenues). The opposite occurred in Asia (see Table 1).

The data on the privatization methods adopted in Western Europe confirm a general trend, with private sales (henceforth PS), i.e. a private equity placement to strategic investors, accounting for the majority of cases. Privatization on public equity markets (public offerings, henceforth PO) are less frequent (28 percent) and typically raise higher revenues (64 percent), being used for larger and often more profitable companies which can be easily floated in domestic and/or international exchanges.

The vast extent of European privatization (see Figures 2, and 3) can be ascribed to the large size of the State-owned Enterprise sector (henceforth SOE) of most European economies, and to the exceptional weight of the British experience.

[INSERT ABOUT HERE Figures 2 , 3]

Indeed, privatization was one of the building blocks of the Thatcherite reforms, which shrank the size of the SOE sector in the UK from 10 percent of GDP to

virtually nil. The 1977 public offer of British Petroleum (BP) is usually considered - after the failed German attempts of the 1950s under the Adenauer government - the first large-scale privatization in modern times.

Shortly after, in the mid-1980s privatization started to spread out also in Continental Europe. In 1985 Italy undertook the long lasting process of denationalization of the State holding company IRI, with the partial sale of SIRT I and Alitalia, and in 1986 the newly elected French conservative government pushed ahead a highly politicized (re)privatization of its financial institutions.

In 1989 Portugal, Spain, the Netherlands and Sweden entered the process. Italy, Portugal and Turkey reported their first large-scale sales in 1993. Throughout the 1990s also Belgium, Greece and Ireland joined the process.

Privatizations experienced an exponential growth at the end of the 1990s, reporting a peak in revenues in 1998 due to a number of large PO in “strategic” sectors, such as ENI (petroleum) in Italy, Swisscom (tlc) in Switzerland, ENDESA (electric utility) in Spain, and France Telecom (tlc) in France. 1999 boasts a remarkable level of revenues, also thanks to the first tranche of the Italian electric generation company ENEL in October, which still represents today the largest IPO (initial public offer) in history.

At the turn of the century the process abruptly slowed down. Between 2000 and 2002 sales and revenues decreased at an average rate of 34 and 50 percent, respectively. Privatization activity in 2002 fell down to the levels reported at the initial stage of the cycle. After this striking dip, mainly due to the global economic downturn and negative stock market conditions, the process resumed in 2003 and regained momentum in 2004 (see Figure 4). Several large PO in the telecommunications (France Telecom, Deutsche Telekom, Telekom Austria, and Telia Sonera); in the financial sector (Eulia in France and Deutsche Postbank in Germany); in the oil and gas industry (French Total, and Norwegian Statoil) boosted privatization revenues to US\$59bn, a figure close to the historical peak levels of the European process.

Importantly, 2004 marked the resurgence of global offers and retail investors appetite towards privatized stocks, allowing for example the implementation of a large offering of shares of ENEL, the Italian electricity giant, which brought into the government coffer over US\$9.5bn.

[INSERT ABOUT HERE Figure 4]

A preliminary analysis of privatization trends at the national level shows that within European countries, the United Kingdom leads the ranking by total revenues (see Figure 5), and Italy boasts the second position, followed by Germany, France, and Spain.

However, revenues scaled by GDP provide a more appropriate measure for a cross country comparison. Indeed, since the size of a country matters in explaining the extent of privatization (as it also affects the size of the SOE sector), the final ranking changes considerably when total revenues are scaled by GDP (see Figure 5, and Figure 6), even if countries such as the UK and Italy remain in prominent positions.

[INSERT ABOUT HERE Figure 5, and 6]

[INSERT ABOUT HERE Table 2]

The comparison between the mean and median values of privatization revenues suggests that the distribution of total revenues is strongly affected by the presence of a few “deep” privatizing countries such as the UK, Italy, and Germany, which report values well above the sample mean. Italy boasts the highest value in average revenues, meaning that larger companies have been sold.

The ratio of public offers to total deals provides some information about the privatization methods. Austria and Portugal have opted more systematically for flotation in public equity markets, while in Germany, Belgium and Sweden the resort to share issues has been much more limited.

The breakdown by industry (see Figure 7) shows that almost no sector is left out of the privatization process. However, the greater part of revenues comes from telecommunications, utilities, the manufacturing industry, finance, petroleum and transports.²

² Industrial sectors are defined as follows. *Agriculture Industry* (SICs 01XX - 09XX) includes: Agricultural Production Crops; Agricultural Production Livestock; Agricultural Services; Forestry; Fishing, Hunting, and Trapping. *Natural Resource* (SICs 10XX;12XX; 14XX) includes: Metal

[INSERT ABOUT HERE Figure 7]

As a general rule, the initial stage of the process involves the manufacturing and industrial sectors, and the financial institutions (the latter in prominent position in terms of proceeds), while the privatizations of telecommunications, energy, transports and utilities (henceforth “strategic sectors”) typically step into the second stage.

However, the timing of the entry of sectors has been different in Continental Europe with respect to the United Kingdom, and definitely the UK went furthest in the shortest time, privatizing in 1977 its national oil company British Petroleum (BP), the telecommunications in 1981 (with the first tranche of Cable & Wireless), several water and electric utilities all along the 1980s, and shortly after the railways.

In the other European countries, apart from some scattered cases at the end of the 1980s (i.e. Alitalia in 1985, OMV, Cie Général Téléphoniques and VEBA in 1987, and ENDESA in 1988), the telecommunications, the utilities, transports and energy sectors are still firmly in public hands until the first half of the 1990s.

Mining; Coal Mining; Nonmetallic Minerals, except Fuels. *Petroleum Industry* (SICs 13XX; 29XX) includes: Oil and Gas Extraction; Petroleum and Coal Products. *Construction* (SICs 15XX - 17XX) includes: General Building Contractors; Heavy Construction, Except Building; Special Trade Contractors. *Finance* (SICs 60XX - 67XX) includes: Depository Institutions; Non Depository Institutions; Security and Commodity Brokers; Insurance Carriers; Insurance Agents, Brokers, & Service; Real Estate; Holding and Other Investment Offices. *Manufacturing* (SICs 20XX - 28XX; 30XX - 39XX) includes: Food and Kindred Products; Tobacco Products; Textile Mill Products; Apparel and Other Textile Products; Lumber and Wood Products; Furniture and Fixtures; Paper and Allied Products; Printing and Publishing; Chemical and Allied Products; Rubber and Miscellaneous Plastic Products; Leather and Leather Products; Stone, Clay, and Glass Products; Primary Metal Industries; Fabricated Metal Products; Industrial Machinery and Equipment; Electronic and Other Electric Equipment; Transportation Equipment; Instruments and Related Products; Miscellaneous Manufacturing Industries. *Public Administration* (SICs 91XX - 97XX) includes: Executive, Legislative, & General; Justice, Public Order, & Safety; Finance, Taxation, & Monetary Policy; Administration of Human Resources; Environmental Quality & Housing; Administration of Economic Programs; National Security & International Affairs; Nonclassifiable Establishments. *Services* (SICs 70XX- 89XX) includes: Hotels and Other Lodging Places; Personal Services; Business Services; Auto Repair, Services, and Parking; Miscellaneous Repair Services; Motion Pictures; Amusement & Recreation Services; Health Services; Legal Services; Educational Services; Social Services; Museums, Botanicals, Zoological Gardens; Membership Organizations; Engineering & Management Services; Private Households; Services, Misc. *Telecommunications* (SICs 48XX) includes: Communications. *Trade Industry* (SICs 50XX - 59XX) includes: Wholesale Trade - Durable Goods; Wholesale Trade - Nondurable Goods; Building Materials & Garden Supplies; General Merchandise Stores; Food Stores; Automotive Dealers & Services Stations; Apparel and Accessory Stores; Furniture and Home Furnishings Stores; Eating & Drinking Places; Miscellaneous Retail. *Transportation Industry* (SICs 40XX - 42XX; 44XX; 45XX; 47XX) includes: Railroads Transportation; Local and Interurban Passenger Transit; Trucking and Warehousing; Water Transportation; Transportation by Air; Transportation Services. *Utilities* (SICs 46XX; 49XX) includes: Pipelines, Except Natural Gas; Electric, Gas, and Sanitary Services.

Only from 1994 onwards, indeed, “strategic” sectors actually became involved in the process. Among the oil companies outside the United Kingdom, Elf Aquitaine, ENI, OMV, Total, and Repsol are the first to be privatized during the early 1990s. Shortly after, coupled with the global context of technological innovation and trade liberalization pushed by WTO, several privatizations involved the telecommunications of Spain, Switzerland, Denmark, Finland, and the Netherlands.

During the second half of the decade, also water, electric utilities and transports started to be privatized, and the percentage of revenues raised through the sales of public assets in “strategic” sectors appears to be highly increasing over time – especially between 1994 and 1997 – remaining then stable at quite high levels (well above 60 percent of yearly total revenues) from 1998 to date (see Figure 8).

[INSERT ABOUT HERE Figure 8]

Overall, the privatizations of strategic sectors raised 68 percent of European privatization revenues through 38 percent of the total area transactions. However, despite these significant results, it seems that European countries fell short to accomplish ambitious privatization programs in strategic sectors, and only few countries, such as the UK and Spain have fully privatized strategic sectors such as energy, telecommunications, or transport, while in some other countries, despite some recent announcements, the majority of assets in strategic sectors (particularly in energy) are still publicly owned.

3. The State-Owned Enterprise Sector in Western Europe

The aggregate data presented provide a preliminary description of European divestitures. However privatization processes would be more fully understood by relating the extent of state sell-offs to the size of the State owned enterprises (SOE) sector pre-privatization.

To our knowledge, the only centralized source of comprehensive data on SOE activity is the World Bank (1995), reporting several indicators for industrialized and developing economies for the 1978–1991 period.³ SOEs are defined as “government

³ See also Nicoletti and Scarpetta (2003); Haggarty and Shirley (1995).

owned or controlled entities that generate the bulk of their revenues from selling goods and services.”

We therefore used the WB database in order to build a proxy for initial conditions given by the value added of State-owned enterprises as a percentage of GDP in the year before the first operation reported by Securities Data Corporation databases (where possible), certainly the most comprehensive source for privatization information at the transaction level.

As shown in Table 2, on average, SOEs accounted for a significant fraction of the economic activity in Western Europe pre-privatization. The European average, indeed, is about 10 percent, while for non European OECD economies this figure narrows to approximately 7 percent. Several countries, such as the UK, Germany, France, Austria, Portugal and Sweden range between 10.

However, these data suffer from several drawbacks. First, the definition used by the World Bank limits to “commercial activities controlled by virtue of government’s (direct and indirect) ownership stake alone.” However, in several cases, SOEs are owned by regional and local bodies, which do not enter in the definition. In other cases, the database does not report the stakes owned by the government in financial entities, and does not take into account the government’s indirect ownership.

For example, the Swedish SOE share of value added would have certainly been higher - and probably larger than the EU average – if the ownership of local and regional bodies were included. Local municipal governments and the regions/county councils control about 1,777 local enterprises altogether, operating especially in housing and energy sectors. The case of Portugal illustrates how the exclusion of the financial sector may distort the real size of the SOE sector. In the mid-1970s the State nationalized the nine largest banks and eight insurance companies. As a consequence, the State owned indirectly hundreds of small and medium enterprises, in which formerly private banks held controlling stakes (Baklanoff, 1986). Finally, the value added figures for Belgium only refer to transport and telecommunication sectors, largely underestimating the size of the SOE sector in a historically highly interventionist State.

Due to these limitations, World Bank data partially fail to appreciate the real size of State ownership in Europe, suggesting the need for a more systematic data collection to fill the gap. Albeit biased, the data show quite clearly that at the

beginning of the 1980s State ownership of productive assets was very large. What factors explain the emergence of such a large SOE sector in Europe?

At the risk of oversimplification, the rise of the State ownership in Western Europe can be traced back to the 20th century, and particularly to three waves of nationalizations that occurred (i) after the Great Depression of 1929-1933, (ii) during the post-WWII period, and (iii) after the oil shocks in the mid 1970s.

The economic downturn caused by the Great Depression led to a strong interventionist approach almost everywhere. In the 1920s, the French and the Belgian governments established financial institutions taking control of the banking sector. In Germany, from the Weimar Republic to the National Socialist period, large scale nationalizations were implemented to foster the industrialization process. Similarly, important nationalizations took place in Austria, involving the telecommunication, transport and banking sectors.

Similarly, in 1933 - under the fascist era- the state-owned industrial holding Istituto per la Ricostruzione Industriale (IRI) was created in Italy in order to recover the national economy. In Spain, the root of State-owned industry dates back to the establishment of Franco's dictatorship. After the Civil War, Spain imported the "IRI" model, creating the Instituto Nacional de Industria (INI), with the aim to strengthen domestic development, foster import substitution, and inject growth in underdeveloped areas. In Portugal, since 1933, the "corporative" ideology became the manifesto of the Salazar's authoritarian regime, which aimed at keeping political and economic activity under tight public control.

As to Northern European countries, State-owned enterprises in Sweden have been established at the beginning of the 20th century to better exploit national resources and to in particular the coal, timber and steel industries. In Finland, the State's economic activities of the 1920s and 1930s have been spurred by the lack of private venture capital and mainly aimed at the exploitation of raw materials, development of infrastructure, achievement of self-sufficiency, financing of business activities and implementation of regional policies.

The second wave of nationalizations were implemented after World War II, and carried on within the economic reconstruction. In the UK, between 1945 and 1951, the SOE sector became one of the largest in Western Europe. In France, in the 1945-1946 period, the State took over control of economic sectors requiring heavy capital

injection - such as coal, electricity, gas and railways - along with credit and insurance sectors. At that time France established a centralized planning body, the Commissariat Général au Plan, with the mission to plan and co-ordinate the entire activity of the public sector. Belgium implemented important post-war nationalizations through the State holding company Société Nationale d'Investissement (SNI), although the government already controlled indirectly a large number of enterprises through banks and credit institutions (Société Générale de Belgique, Caisse Générale d'Épargne et de Retraite (CGER), Crédit Communal de Belgique). In Austria, the nationalization basically involved all the former already nationalized companies successively taken over by the German Reich. The former "German property", indeed, - including industrial enterprises founded by the Nazis - accounted for one fifth of Austrian value added. It included the country's three largest banks, the entire coal and metal mining industry, all mineral oil extraction and processing facilities, and all the important companies in the heavy industry sector. Nationalized industry made the Austrian public sector one of the largest in continental Europe. The State holding company Österreichische Industrieholding (ÖIAG) played an important role in economic reconstruction in the occupation zones, also thanks to the American reconstruction aid.

The third wave of nationalizations occurred in Europe in the aftermath of the oil shocks, in the period that goes from the mid 1970s to mid 1980s. State-owned firms were increasingly used for stabilization and direct employment policies, to rescue ailing private firms, sustain investment, and support underdeveloped regions. In general, and in particular in Spain, Italy and Sweden, non-economic goals were put above corporate policy objectives.

In France, the promotion of "national champions", which competed from a favored position with domestic and foreign rivals, has been an important feature of the industrial policy of the period. Along with the direct ownership of the main economic sectors, including key industries, the State control over the economy took the form of industrial protection and subsidies, and control over foreign investments. This whole range of policy instruments typified the "French Model" of State intervention in the economy. Finally, during the revolutionary period (1974-1976), Portugal launched a massive nationalization program, involving a large number of companies which came under direct State control via the holding company IPE (Investimentos e Participações do Estado).

The abnormal growth of the SOE sector ensuing from these three waves of nationalization clashed with the rising requirements of global competitiveness. The pursued type of stabilization policy allowed to smooth the adjustment process, but caused negative effects on the productivity and profitability of SOEs and on the state of public finances.

In early 1980s, the problem of the inefficiency of the SOE sector – absorbing an increasing amount of public subsidies – became a priority in the political agenda of most European countries, prompting the surge of privatizations that began in the 1980s and gathered momentum from 1991 onwards after the ratification of the Maastricht Treaty. The restructuring and privatization of the SOE sector became necessary not only to modernize the economy, but also to meet convergence criteria without politically costly tax increases.

4. Determinants of privatization

The previous section has pointed out that common factors can explain the rise of the SOE sector in Europe, and that with a few exceptions, European governments, at the beginning of the 1980s, owned on average large chunks of the national economy. Within this common pattern, historical specifics matter and can be reflected in the cross country variability in the percentages of SOE value added that we observe in the European context.

Although some caution is needed in the interpretation of World Bank data, it is certainly interesting to construct an indicator about the extent of privatization in a given country which could take into account initial conditions. In this direction we have scaled the total revenues raised in a given country in the 1977-2000 period by the total valued added of SOE in the year preceding the first privatization sale (Rev/SOE in Table 2). The number obtained provides therefore a measure of the “size” of one country’s privatization process relative to what governments have to sell.

The data show that Portugal has carried out the largest contraction in State property, followed by the UK, Netherlands. Spain and Italy rank in middle high position, while France and Austria report the lowest scores.

Interestingly, as shown in Figure 9, privatization revenues scaled by our proxy for the size of the SOE sector appear to be strongly correlated with the revenues to GDP ratio (corr. = 0.87), a widely used measure in cross country analyses of the size of privatization. Rev/GDP series can be easily constructed for a large number of countries and therefore allow for panel data empirical analyses. The positive correlation with a more proper measure of one country's privatization effort is reassuring, and suggests the feasibility of comprehensive empirical analyses on the political and economic determinants of privatization in Europe.

[INSERT ABOUT HERE Figure 9]

Bortolotti and Pinotti (2003) perform an econometric analysis on a sample of 21 developed countries (16 European) for the 1977-1999 period, estimating in Tobit panel regressions the yearly ratio of revenues to GDP. Macroeconomic conditions appear particularly relevant. The extent of privatization appears higher in countries with higher per capita GDP and lower growth rates, which in turns means that privatization characterizes a relatively advanced stage of economic development. The inverse relation found between (lagged) growth rates and privatization could also indicate that governments tend to resort to privatization when the economic outlook deteriorates, in order to foster economic activity via an increase in private investment. Fiscal conditions are also particularly relevant, as we find the debt ratio always highly statistically significant. Indeed, privatizing countries are often financially distressed, and they allocate revenues to amortization funds that allow directly to reduce the debt, and indirectly to improve the fiscal budget due to lower interest payments.

Finally, and not surprisingly, privatization is more likely where large and liquid stock markets are in place. The coefficients of the (lagged) market capitalization and the turnover ratio are positive and statistically significant. Well-developed financial markets are key as they allow the absorption of big share issues. Liquidity is also particularly important as after market liquidity is discounted in privatization prices, allowing governments to raise more proceeds. The turnover ratio is also a measure of market activity, which typically increases with a bull market. The positive sign of the coefficient can also be interpreted as governments taking advantage of "hot markets" to float companies, in order to fetch a better price.

Apart from macroeconomic factors, the paper takes into account political and institutional factors as possible determinants of privatization. Particularly, the authors develop an index which includes three components *(i)* a measure of the disproportionality of the electoral rule (the Gallagher index); *(ii)* the effective number of parties; *(iii)* an indicator of the type of executive. Higher values of the political institutional index are associated with a better fit with the majoritarian model, while lower values with the consensus model, which is characterized by strong veto players and a more disperse-decision making power (Lijphart, 1999).

As predicted by the theoretical literature on the political economy of stabilization policies (Alesina and Drazen, 1991; Spolaore, 2003), majoritarian countries privatize more: where less power is granted by the electoral rule to minorities, minority will is underrepresented, and a lower number of veto players is found in the political arena, Therefore large scale reforms packages (which typically include privatizations) are more likely to be implemented. The feasibility of a large scale privatization program therefore is affected by institutional constraints.

5. The outcomes of privatization processes

In this section we will try to investigate some of the main consequences of privatization in Europe, both at the macro and microeconomic level. At the macroeconomic level, we will try to shed some light on the effects of privatization on *(i)* fiscal conditions of European countries, and *(ii)* on financial market development. At the microeconomic level, we will try *(i)* to survey the evidence on the performance improvements of privatized SOEs; *(ii)* to document the role of share issue privatizations in fostering popular capitalism and ownership diffusion; and finally *(iii)* to understand whether privatization involved substantial changes in corporate governance structures of European privatized companies.

5.1 The impact on macroeconomic variables

To our knowledge, the effects of privatization on macroeconomic variables have never been the object of a formal analysis. The empirical literature addressing these issues is also quite limited, and no solid evidence has yet been produced in the context of western European countries. This is rather surprising because

macroeconomic conditions, especially high deficits and public debt, have been key driver in the decision to privatize the European SOE sector.

In principle, the purpose of privatization is to achieve a redeployment of assets from the public to the private sector. Under the assumption that assets are used inefficiently by the public sector, privatization should spur productivity and the growth of aggregate output. Given that it may take some time for these effect to materialize, one could claim that a sustained privatization policy should foster long term growth and increase output levels of the economy.

Apart from long term considerations, as noted by Mackenzie (1998), privatization programs may have important macroeconomic consequences also in the short run, and especially on public finance aggregates.

To evaluate these effects, it is important first to establish the valuation differential of the assets in public vs private hands, namely the difference between the present value of the income streams generated under public and private ownership. Second, an assumption should be made about the allocation of privatization proceeds.

Suppose that the valuation differential is negative and that revenues are used to retire outstanding debt. Then, the operation improves the public sector net worth and, thanks to lower interests payment loosens the government inter-temporal budget constraint. Private sector wealth and consumption should not fall, since due to the operation the private sector reduces its holdings of money, and increases its holdings of less liquid financial assets. Privatization may instead affect private investment, in the sense that it could crowd out investment that would be otherwise undertaken. Aggregate demand could therefore fall unless the government sterilizes this effect by using the proceeds to finance new investments.

Suppose instead that the valuation differential is positive. This may stem from a different degree of risk aversion: public assets are discounted at higher rates by the private sector rather than by the government, and privatized assets are transferred at underpriced values. In this case, the operation worsens the public sector net worth and tightens the inter-temporal budget constraint since future income flows are not reflected in privatization prices. Under this circumstance there may be a limited effect on investment, but a sizeable wealth effect if the private sector perceives the windfall gain. Privatization policy may therefore have an expansionary impact in the short run.

Suppose instead that proceeds are treated as fiscal revenues (and so put “above the line”) and used to finance budget deficits. In this case, the public sector net worth would decrease (independently from the valuation), as the government sells fixed assets to finance public expenditure or tax cuts.

The final effects of privatization on public finances depend also on the possible reduction of State subsidies to SOEs, the increase on tax revenues due to the increased profitability of privatized firms, and importantly on the consequences of privatization in the labor market.

Indeed, privatization may involve lay-offs and labor shedding in SOEs, with a possible increase in unemployment benefits in the short run. In the long run it is likely that the positive effects of privatization in terms of increased productivity may spur economic growth and bring the economy to a lower equilibrium level of unemployment.

The overall macroeconomic effects of privatization have never been properly addressed in a general theoretical model which could provide testable predictions. However, a consensus view is that *ceteris paribus* privatization improves fiscal conditions when privatization proceeds are treated as financing and not as a source of budgetary revenue (Lopez Calva and Sheshinski, 2000).

Some empirical work has been carried out to test the effect of privatization on fiscal deficit in Spain, Greece, Italy and Portugal using data for the 1990-1997 period. Jeronimo, Pagán, and Gökçe (2000) find a negative and statistically significant relationship between privatization revenues and deficits for the 1990–1997. Katsoulacos and Likoyanni (2002) examine the impact of privatization on public deficit, on public debt and on other macroeconomic variables (employment and growth) using country level panel data of 23 OECD countries for the period 1990 – 2000.

Katsoulacos and Likoyanni do not find any correlation of privatization variables with budget deficit neither for the whole OECD sample, nor for the four southern European countries. Thus the results by Jeronimo, Pagán, and Gökçe (2000) do not seem to be robust to an extension of the sample period (from 1997 to 2000). However, Katsoulacos and Likoyanni document a statistically significant and negative relation between privatization revenues and public debt. Current privatization receipts have a statistically significant and negative effect on the current

unemployment rate and a positive effect on previous period's unemployment rate. When privatization is announced, the announcement is typically followed by restructuring and lay-offs causing an increase in the unemployment rate. When privatization is instead implemented, output may grow, increasing the demand for labor and, thus, decreasing unemployment rate. Finally, Katsoulacos and Likoyanni find, rather surprisingly, that the relations between GDP growth and current or past period's privatization receipts are statistically insignificant for the whole OECD sample.

These results suggest that privatization may be strongly correlated to macroeconomic variables, but certainly more theoretical and empirical work is needed to understand more fully the channels through which privatization affects aggregates.

5.2 Financial market development

The development of equity markets has been one of the main objectives of divestiture throughout Europe. The British privatization program certainly represents one of the most successful experiences. However, the first experiment to strengthen equity culture through privatization in recent financial history was carried out during the 1960s in Germany by the Adenauer government. Subsequent and more ambitious programs to jumpstart or revitalize national exchanges are reported in France in the 1980s under Chirac government, and especially in Italy throughout the 1990s.

But beyond national programs and announcements, it is important to examine first whether privatization is consistent with the objective of stock market development, and second how European governments designed sales to achieve it.

Obviously, as the US experience clearly shows, stock markets could flourish without privatization. Furthermore, other policies, such as the reduction of tax rates on dividends, the establishment of efficient trading infrastructure, and the enactment of sound financial regulation are likely to promote financial market development. Yet a sustained privatization process based on the floatation of shares of SOEs in the stock market should have a strong effect in jumpstarting a market caught in a "low liquidity" trap.

The theoretical models backing this prediction are Pagano (1993), and Subramanian and Titman (1999). The basic assumption is that the listing decision

involves important positive externalities on other market participants. But when a company goes public, the entrepreneur fails to recognize the beneficial effect in terms of improved diversification opportunities stemming from his decision. Hence, financial markets can be trapped in a bad equilibrium with few listed firms and high risk premia. The government, as the single owner of several companies, can shift away the market from this bad state through a sequence of IPOs and secondary offerings of privatized companies, and hence reduce the risk premium, and improve overall market liquidity.

A second important aspect is related to the sheer size of SOEs. These companies are usually the largest firms in the country, and even a partial floatation may have a large effect on market capitalization and free float. Importantly, the limited absorption capacity of national stock markets have often induced government to tap major foreign exchanges by cross-listing shares at home and abroad. This privatization strategy stimulates the participation of foreign investors and may reduce the risk premium. Even though it concerns primarily the cross-listed firms, foreign participation will also benefit the liquidity of shares traded only in the local market. If the returns of privatized and local companies are positively correlated, foreigners will share some of the risk borne only by domestic investors prior to privatization. This reduces the required risk premium and thereby increases the value of domestic shares (Chiesa and Nicodano, 2003).

There are sound theoretical reasons to claim that share issue privatization, i.e. the privatization on public equity market as opposed to private placements to strategic investors, promotes financial market development. It is now important to document whether or not the choice of the privatization method is consistent with this stated objective. One would expect privatization on public equity markets to be implemented more frequently in countries where governments are more eager to boost domestic financial development. Obviously this choice involves a trade-off. Share issue privatizations are likely to fail in fledgling stock markets for the simple reason that it is more difficult to find buyers, and that offerings have to be more strongly underpriced (Dewenter and Malatesta, 1997). Due to the costs of using the public capital markets, governments may opt for private sales in less developed capital markets.

To our knowledge, this trade-off has never been the object of empirical analysis in the European context. However, Megginson, Nash, Netter and Poulsen (2000) study the choice of the privatization method for a large sample of (mainly developed)

countries, finding that the objective of financial market development dominates – on average – revenue maximization. Indeed, share issue privatizations are more likely in countries with a lower turnover ratio, even controlling for public finance conditions via budget deficits.

Overall, these results suggest that financial market development matters in the choice of the privatization method. But have European governments been able to achieve it ?

A bulk of evidence can be set forth to document the dramatic change in the European financial landscape in the last two decades, when large scale privatization processes were in progress.

As table 3 shows, the average total market capitalization relative to GDP in Europe has increased five times from 1985 to 2000, from 18 to 91 percent. Finland boasts the largest leap throughout the period, from less than 10 to more than 200 percent of GDP. Financial market development has also been remarkable in France, Italy and Spain, where the market capitalization has increased even more than the European average. It is not obvious to quantify the impact of privatization on market capitalization, given the presence of indirect effects via spill-overs and cross-assets externalities. However, a first indication can be provided by looking at the change in the weight of privatized companies on total market capitalization. On average, the relative contribution of privatized companies has increased from 14 to 34 percent, which can partly be ascribed to privatization IPOs, but also the enhancement of market value of newly privatized firms. Interestingly, countries such as France, Italy and Spain report the highest increases in the relative weight of privatized companies together with above-the-average increases in market capitalization. Privatization activity may have therefore played an important role in deepening European stock markets.

[INSERT ABOUT HERE Table 3]

Some interesting facts are also found by looking at the evolution of trading activity measured by the turnover ratio (the total value of trades relative to total market capitalization). On average the turnover ratio increased about four times in the 1985-2000 period. The development of trading volume has been particularly marked in countries such as Finland, Spain, Portugal, and Sweden. The fraction of trading in

shares of privatized companies has dramatically increased over this period, from a bare 7 percent in 1985 to 32 percent in 2000. Interestingly, countries such as Italy, Spain and Portugal, where trading in privatized stocks increased the most, report also substantial variation in total trading activity, a preliminary finding which suggests that privatization may foster financial market development above the mechanic increase in market capitalization.

However, market capitalization and trading volumes fail to capture a fundamental aspect of financial market development, namely *liquidity*. Liquidity is important because it allows companies to raise capital more cheaply (Ellul and Pagano ,2004), and to design stock based managerial incentives schemes (Holmstrom and Tirole 1993), spurring company performance, efficiency, and ultimately economic growth. But liquidity is a quite elusive concept which is hard to define, let alone to quantify. The bid-ask spread has emerged as a conventional proxy for liquidity but these spreads are difficult to compare across countries due to differences in market microstructure. Some of these difficulties can be circumvented by the use of price impact measures, given by the absolute value of return scaled by volume traded.

Bortolotti, De Jong, Nicodano and Schindele (2004) estimate the effect of share issue privatization on stock market liquidity measured by the price impact in OECD countries, while accounting for other potential determinants set forth in the literature, such as the enforcement of insider trading regulation, political and country risk, and capital markets liberalization. They find that privatization represents a source of variation of market liquidity. Particularly, as predicted by theory, the international profile of privatization matters the most. The price impact (hence liquidity) appears to be strongly and negatively (positively) correlated with the quantity of shares allocated to foreign investors in international exchanges. Importantly, the effect of cross-listings at the privatization stage survives when the liquidity of *private* companies is considered. A large scale privatization program based on international SIPs generates important positive externalities on the liquidity of private companies as well by improving diversification opportunities and by reducing risk premia.

5.3 The financial and operating performance of European privatized firms

There is no study available in the literature investigating the performance of European privatized firms in a single and comprehensive statistical analysis.

However, some information could be grasped from Megginson, Robert Nash and Matthias van Randenborgh (1994) and Juliet D'Souza and Megginson (1999) (MNRD) papers, dealing with the pre-post privatization performance changes in relatively large samples of privatized companies. The majority of these 133 companies are from industrialized economies, with a large predominance of European countries, so that the information coming from these papers – with a lot of caveats – could represent a useful starting point. We will then try to complement the analysis of performance reporting results of some country studies in the European context.

MNRD studies yield consistently positive results on the effectiveness of privatization in promoting improvements in the financial and operating performance of divested companies. By documenting economically and statistically significant post-privatization increases in real sales (output), profitability, efficiency (sales per employee), and capital spending, coupled with significant declines in leverage. This point is made clear in Table 4, which summarizes the results of the two studies.

[INSERT ABOUT HERE Table 4]

Additionally, these two studies consistently document that output, efficiency, and capital spending increase dramatically and significantly after privatization. Meanwhile, leverage declines significantly. Megginson (2003) comments these results concluding that “unlike profitability increases, these are all unambiguously socially beneficial outcomes, since they imply that privatized firms use resources more productively and also become financially healthier. That these benefits are achieved without systematically reducing employment also suggests that privatization yields important social benefits. In sum, the weight of evidence in these studies clearly indicates: (1) that privatization improves the operating and financial performance of newly divested firms, (2) that these improvements are the result of socially beneficial improvements in productive efficiency and entrepreneurial effort, and (3) that privatization “works” in a wide variety of countries, industries, and competitive environments.”

The methodologies pioneered by MNRD have become standard in the empirical analysis of the performance of privatized firms. However, they suffer from several drawbacks. First, selection bias raises probably the most serious concern, as the

sample is made of companies sold in public equity markets via share issue privatization (SIP) programs. These companies tend to be the largest and usually the most profitable SOEs, which due to intense restructuring pre-privatization are certainly the easiest to privatize. Second, the two snapshots taken on performance measures pre and post privatization do not allow disentangle the possible sources of these improvements, which may be ascribed to privatization *per se*, but also to other factors such as a lack of competition or weak regulation.

Some steps in this direction have been made by Bortolotti, D'Souza, Fantini, and Megginson (2002) in a study on the global telecommunication industry, virtually including all major European operators. Using panel data models, it is found that some performance measures are more strongly affected by competitive conditions (with higher profitability associated with less intense competition in the product markets) rather than the privatization alone.

The existing evidence stemming from cross-country analyses does not allow to conclude that privatization *per se* has been the key in boosting the financial and operating performance of firms, but rather the combination of liberalization, regulatory and ownership changes.

In what follows, we will try to complement this evidence by summarizing the main results of country studies on the economic and financial effects of privatization on the behavior of privatized SOEs in European context, starting from the UK experience.

Several studies document significant performance improvements along some key performance measures but most of them conclude that the program could and should have been executed with more concern for distributional issues and/or with greater protection built for consumers.

Saal and Parker (2003) examine the productivity and price performance of the privatized water and sewerage companies of England and Wales after the industry was privatized and a new regulatory regime imposed in 1989. They document that labor productivity improved significantly after privatization, but they find no evidence that total factor productivity grew as a direct result of the ownership change. They also find that increases in output prices have outstripped increased input prices, leading to significantly higher economic profits after privatization.

Newbery and Pollitt (1997) perform a counter-factual analysis of the 1990 restructuring and privatization of the UK's Central Electricity Generating Board

(CEGB), and document significant post-privatization performance improvements. However, they find that the producers and their shareholders capture all of the financial rewards of this improvement and more, whereas the government and consumers lose out.

Price and Weyman-Jones (1996) measure the technical efficiency of the UK natural gas industry before and after its 1986 privatization and associated regulatory changes. They employ non-parametric frontier analysis to show that the industry's rate of productivity growth increased significantly after privatization - though not as much as it could have if the industry had been restructured and subjected to direct competition and more appropriate regulation.

In a comprehensive case-study on the UK, Florio (2004) uses cost-benefit analyses to investigate the effect of privatization on firms, consumers, shareholders, workers, and taxpayers, concluding that the overall effect of "the Great Divestiture" on efficiency has been modest, and that privatization had a substantial regressive effect on the distribution of incomes.

Studies conducted in other European countries provide very mixed evidence. Villalonga (2000) examines the effect of privatization on the operating efficiency of 24 Spanish firms that were fully divested between 1985 and 1993. Privatization seems to decrease efficiency over the intermediate term (5 and 6 years after divestiture), but to increase efficiency over the longer term (7 and 8 years) afterwards and in the period leading up to privatization (4 and 3 years before).

Dumontier and Laurin (2002), investigate the value that was created or lost during the State ownership period for each of the 46 French companies (39 banks and 5 industrial firms) that were nationalized during 1982 and then re-privatized between 1986 and 1995. They analyze whether the subsequent privatization of these companies improved performance over that achieved during the post-1982 nationalized period. They find that the French government created value in the nationalized firms, but the State and taxpayers did not benefit because of the premium that was paid to shareholders upon nationalization (20 percent), and because of the underpricing of the IPOs at the time of privatization. The financial and operating performance of companies improved during the nationalization phase, then improved even more after privatization. Employment fell during the nationalization, but increased (due to higher sales) after privatization.

Goldstein and Nicoletti (2003) conduct a performance analysis based on a sample of 25 Italian privatized non-financial firms. Their analysis is important as it is one of the few based on a comparison with a control group of private companies, which allows to take into account cyclical movements in the economy. Interestingly, none of the traditional indicators used in MNRD studies gains statistical significance, with the exception of investment indicators which show a marked improvement.

The evidence presented in this section does not allow us to provide an unambiguous answer about the role of privatization on the financial and operating performance of European SOEs. First, the bulk of the evidence coming from cross-country studies does not appear to be robust. Second, countries studies provide mixed results. Importantly, the implication of privatizations in terms of allocative and productive efficiency have not yet empirically been documented in comprehensive statistical analyses.

5.4 Popular capitalism and ownership diffusion

The political economy approach to privatization points out that fostering popular capitalism and widening share ownership are possible objectives of divestiture which right wing market-oriented governments may find particularly attractive. The reason for this preference is not purely “ideological”, but grounded on self-interest and political opportunism. Indeed privatization, by making equity investment attractive for the middle classes, can create a constituency with an interest in increasing the value of its assets and therefore averse to the redistribution policies of the left. In this way, privatization can be a rational strategy for raising the probability of electoral success of market-oriented coalitions. The key variable to achieve re-election via privatization is underpricing, which in turn depends on income distribution. Indeed, the poorer is the median voter, the more underpricing is needed to entice him to become a shareholder in privatized firms (Biais and Perotti, 2002).

The English experience seems to fit in quite well with the empirical implication of this model. The Thatcher government’s privatization program, especially in the initial term, was implemented with the declared objective of expanding and spreading equity ownership. This was achieved through a massive program of share issue privatizations (SIPs) characterized by substantial underpricing.⁴ In this way, the distribution of equity at a discounted price made the re-nationalization (proposed in

the Labour party's electoral program) costly while simultaneously increasing conservative support. Indeed, the five consecutive victories by the Conservatives indicate that strategic privatization (in combination with other market oriented policies such as tax relieves, reduction in public expenditures, and deregulation) may have paid off at general elections.

Beyond the English experience, it is commonly recognized that privatization are politically motivated. A bulk of empirical papers have provided evidence that partisan politics matters in the choice of the privatization method. Particularly, privatization implemented by right wing governments in developed (mainly European) countries tend to be structured as public offers instead of private equity placements (Bortolotti and Siniscalco, 2004; Bortolotti and Pinotti, 2004), to be more strongly underpriced where the income inequality is higher (Jones, Megginson, Nash, and Netter, 1999), and to exhibit a preferential allocation of shares towards domestic retail investors (Bortolotti and Siniscalco, 2004).

The available evidence appears broadly consistent with the idea that political objectives shape privatization. However, the empirical literature has not established whether privatization contributed to widen share ownership, and to promote popular capitalism, nor that it has significantly shifted political preferences by creating support to market oriented policies in Europe.

Boutchkova and Megginson (2000) analyze the evolution of share ownership in a sample of SIPs, concluding that the initial structure of shareholding does not appear to be stable over the long run. Indeed, the striking number of initial shareholders (often over 100,000) declines by 33 percent within five years of the offering. The privatization process in the United Kingdom seems to point this direction, as the inflation in the number of shareholders in privatized firms has been a temporary phenomenon. Clarke and Pitelis (1993) document substantial individual flipping such that the majority of initial investors immediately disposed of their holdings to cash the initial discount. The majority of shares ended up eventually with the financial institutions.

In a comprehensive analysis of retail incentives in share issue privatizations from 1981 to 2003, Keloharju, Knupfer, and Torstila (2004) come to a sharply different conclusion with respect to the UK case-study. First, they document a widespread use of retail incentives such as bonus shares, i.e. a free distribution of shares to investors

⁴ See Biais and Perotti (2002); Jenkinson and Ljunqvist (2000).

holding shares for a given period (frequently 24-36 months). Second, they document that these measures are costly, but extremely effective in attracting retail investors. Particularly, they find that a dollar spent in retail incentives increases the number of investors participating in the offering 21 times more than a dollar spent on underpricing. Finally, in an interesting controlled experiment based on Finnish privatizations, they document that flipping is not simply postponed at the end of the lock-up period but substantially reduced in bonus tranches as compared to regular tranches.

Retail incentives (which have been regularly used in share issue privatization) have worked well to meet the goal of widening the domestic shareholder base. The fact that these incentives are absent in private sector offerings confirms (again) that political objectives shape divestiture. It would be interesting to know more about the role of political preferences towards these incentives. Should bonus shares and incentives be systematically associated with share issue privatization by right wing governments, then a final test could be provided about the link between partisan politics and the objective of spreading share ownership and equity culture.

5.5 Ownership and control in privatized firms

The wave of privatization occurred in Europe during the 1990s definitively represents one of the greatest transfers of ownership in the history of the corporation. However, there is a lingering belief that privatization did not alter dramatically the corporate governance of SOE, which governments still hang on to control by direct and indirect means.

This section presents updated empirical evidence on the transfer of ownership and control in European privatized companies. The transfer of ownership is measured by the stake sold in the various operations in different countries. The transfer of control, instead, is analyzed through the government's voting rights in privatized companies, and by the temporary or permanent restrictions to the control rights of the private investors such as "golden shares".

The divestiture of minority holdings, or partial privatization, appears to be quite common in Western Europe. From 1977 to 2003, 59 percent of the 1,133 deals involved the sale of the majority of stock. Interestingly, this percentage shrinks to 21 percent in the sample of privatizations through public offer, where the average percentage of capital sold is 36 percent.

Table 5 shows the average percentage of capital sold in privatization deals in European countries. Obviously, a distinction has to be made between public offerings, which involve the largest companies and often more profitable SOEs floated in the stock market, and private placements, which instead are typically used to sell small sized firms operating in non strategic sectors. The data show that privatization of the latter tends to be more complete especially in countries such as the United Kingdom, Sweden, Germany, France and Finland. On the contrary, partial privatization is typical of larger SOEs, which are usually sold by tranches. Indeed, lower averages of capital are sold through public offers of shares in almost all major European countries, with the exception of the United Kingdom.

[INSERT ABOUT HERE Table 5]

Partial privatization is certainly an interesting feature of State's assets disposal. The effect of partial privatization should not be understated, given that the initial listing of the shares of the SOE can have first order effects on managerial incentives and performance (Gupta, 2004). However it is important to document whether partial sales are just a snapshot of a process that will end with a complete divestiture, nor they tend to persist over the long run, as if governments were not really intended to give up ownership and control.

While privatizing the first tranche represents a win-win solution, allowing the government to raise revenues and to enhance the company value, the complete relinquishment of control is a politically costly decision given that governments lose a powerful instrument for targeted redistribution (as high wages and job security could be earmarked to special categories of workers), the right of having representatives in the boards in order to affect corporate decisions, and the power to safeguard public interests and national security.

Bortolotti and Faccio (2004) dig into the issue of government's control by analyzing the recent evolution of ultimate voting rights in 141 privatized companies, of which 81 percent from Western Europe.

Ultimate (direct and indirect) control (voting) rights by private and public shareholders (including the central State, federal or regional bodies, Central Banks,

etc.) are computed as the weakest link along the control chain, taking into account pyramiding and cross-holdings (as in La Porta, Lopez de Silanes, Shleifer, and Vishny 1999). Then several categories of privatized firms are identified according to the identity of the largest ultimate controlling shareholder at the 10 percent cut-off level (see Table 6).

[INSERT ABOUT HERE Table 6]

In fact, the privatization process in developed economies (and particularly in Europe) does not seem to be accomplished. As of 2000, the State is *still* the largest shareholder in almost 30 percent of the privatized firms of our sample. The rest of the sample is split between family controlled (19 percent) and widely held firms (30 percent).

The high percentages of State-controlled firms observed in year 2000 feed the suspicion that privatization has been carried out reluctantly during the 1990s. In order to quantitatively assess this reluctance, we take a second snapshot in a previous year.

Data availability allows us to go back in time to 1996, when we find a higher number of State-controlled firms (34 percent), a lower number of widely held (27 percent) and privately owned companies (16 percent). During the period, the government has relinquished control only in 10 companies, which account for 7 percent of our sample.

The analysis of ultimate voting rights of the largest shareholders reported in Table 7 yields some interesting results. In 2000, the largest shareholder on average controls 25 percent of voting rights. When the government is the largest shareholder, it controls more than 50 percent of voting rights. “Government-controlled” privatized firms show therefore a much higher concentration of power, which does not seem to decline over time.

[INSERT ABOUT HERE Table 7]

We now beg a final question. Is it possible to identify economic reasons to rationalize governments reluctance to sell, or has it to be traced back to their willingness to keep companies under political control? More precisely, are there idiosyncratic factors - maybe related to a given country, sector, or business activity - which could explain why some SOEs are so tightly controlled?

One possible way of testing this hypothesis is to construct a control sample of private firms, and then to compare the evolution of the ultimate ownership within the two samples.

Table 7 reports some statistics on the ultimate ownership of privatized companies as opposed to their respective matching private firms.⁵ The pooled data suggest a quite strong convergence between the privatized firms and the control sample. The samples report a statistically significant difference in means of approximately 7 percent in 1996, which becomes insignificant and negligible in 2000.

In the sub-sample of government controlled firms, control structures do not converge at all. On average, in 1996 the public shareholder owns a control stake which is 30 percent higher than the one owned by the largest ultimate shareholder in private firms. This difference shrinks only marginally at the end of the period, while remaining highly statistically significant.

This evidence about the dynamics of ownership in privatized companies allows a deeper understanding of government's reluctance to sell. On average, the European privatization process has contributed to the roll back of the State in the ownership of productive assets. Several companies have been sold off, and in these companies the governments do not appear as the major shareholders post-privatization. However, there is also a hard core of companies which remain tightly controlled by the State over time.

The previous analysis has shown that several State-owned enterprises have been fully privatized during the 1990s. However, the sale of a majority holding is not itself a sufficient condition to avoid government interference in privatized companies. Governments can grant themselves wide discretionary powers over partially or even fully privatized companies by the use of "golden shares". By exerting its rights, the "special" shareholder can often influence the choice of management, exert veto power over the acquisition of relevant stakes by private shareholders, even without owning the majority of stock in the company, or a single share of capital.

Golden Share can broadly be defined as the complex of special powers granted to the State and the statutory constraints in privatized companies. Typically, special powers include (i) the right to appoint members in corporate board; (ii) the right to

⁵ For a detailed description of the methodology used to identify the control group see Bortolotti and Faccio (2004).

express a consent or to veto the acquisition of relevant interests in the privatized companies; (iii) other rights such as consent on the transfer of subsidiaries, dissolution of the company, ordinary management, etc. The above mentioned rights may be temporary or not. Statutory constraints instead include (i) ownership limits; (ii) voting caps; (iii) provisions of national control.

As Table 8 shows, in Western European countries golden shares are widespread. In 1996, they are found in more than 42 percent of the companies in our sample, and in each and every country. Furthermore, they are highly concentrated in some sectors, such as defense, where 100 percent of the privatized companies have golden share, telecommunications (83 percent), oil and gas (62 percent), utility (64 percent) and transports (40 percent).

Indeed, governments resort to golden shares in order to protect a broadly defined concept of “national security” as they allow to shielding privatized companies operating in the defense business from hostile (foreign) take-overs but also utilities providing public services, such as gas, electricity, water, telecommunications, and transports. The provision of such services but also the safeguard of essential facilities are certainly strategic, especially when privatization did not proceed in parallel with adequate liberalization and effective regulation.

Table 8 provides a comprehensive account of government power in privatized firms, by taking into account in combination voting rights and golden shares mechanisms. As of 2000, 64.9 percent of the 118 privatized companies for which reliable information is available are either directly controlled by the state or warrant special powers to the public shareholder through additional control devices.

[INSERT ABOUT HERE Table 8]

This combined evidence shows that governments are reluctant to privatize, and this reluctance appears particularly strong in the so-called strategic sectors. This protectionist attitude can certainly be attributed to governments’ willingness to maintain firmly political control over one country’s largest and most valuable corporations. However, the failure to relinquish control has also to be traced back to the various economic and institutional constraints shaping economic policy. Indeed,

genuine privatization is problematic if markets are not competitive, and regulation is weak.

These new results on the corporate governance of privatized firms beg a final question: Does reluctant privatization matter in the valuation of firms?

According to a largely held view, a principal-agent plagues government controlled firms, as the owners (the taxpayers) have different objectives from the bureaucrat or the politician controlling the firm. In these firms, the manager may run the company to achieve political objectives such as keeping redundant workers, and not to maximize profits. When control rights are transferred to the private sector, more emphasis will be placed on efficiency (Vishny and Shleifer, 1994). This theory has a straightforward empirical implication: in privatized firms, government voting rights are negatively related to the market valuation of a company.

Bortolotti and Faccio (2004) test this hypothesis by regressing ultimate voting rights on (adjusted) market-to-book ratios in a large sample of privatized firms, and find a quite surprising result: higher government control rights are *not* negatively discounted in market values. On the contrary, government controlled privatized companies appear on average more valuable than fully privatized firms. Results do not appear to be driven by reverse causality nor by the agency costs of private ownership, and survive when several control variables (including sector dummies) are included.

Indeed, it is possible that governments grant special benefits to privatized companies in which they retain control, regardless of industries. The potential benefits include subsidizing loans, guaranteeing contracts, and shielding companies from competition.

A caveat is in order. This analysis on the effect of government power in firms are performed in a sample of privatized companies listed in the stock market. The reader should not jump to the conclusion that state ownership is superior since the empirical literature has documented major performance improvements in state-owned companies when they are initially privatized. Rather, the previous result points out the existence of a non linear relation between government rights and market valuation, which should be investigated in a richer theoretical setting where the “grabbing hand” hypothesis is complemented with other hypotheses on the behavior of politicians in firms.

6. Conclusions: the outstanding issues

Privatization has certainly been one of the main events of the economic and financial history of the 20th century. Western Europe had a great bearing in such a process, having raised a half of worldwide proceeds. The relevance of Western Europe in the process can be ascribed to several factors, the main one being the abnormal growth of the SOE sector which occurred during the century to foster the industrialization and stabilize the European economies severely hit by adverse shocks.

At the turn of the century, the process abruptly slowed down at the global scale, and especially in Western Europe, the continent that launched the process.

This stylized fact begs an important question. Is privatization in Western Europe a long term trend proceeding in parallel with the advancing of market capitalism, or rather a cycle following the short or medium term fluctuations of economic fundamentals?

The empirical analysis shows that privatization processes are shaped by economic and political determinants. Particularly, they are affected by market conditions, so that large privatization waves are systematically associated with bull stock markets. But budget constraints and political institutions also matter. Weak fiscal conditions and the urge to meet Maastricht criteria have certainly been major drivers in the privatization decision, as financially distressed governments have been more eager to privatize. However, government preferences face institutional constraints so that large privatization programs have been more smoothly implemented in countries endowed with majoritarian political institutions, curbing the veto powers of averse constituencies and entrenched interests.

We can therefore tentatively conclude that the big privatization wave of the 1980s and especially 1990s has mostly been a cyclical phenomenon, where the engine of sales have been booming stock markets, and worsening fiscal conditions. However, within this common trend, the extent to which governments privatize depends upon exogenous political and institutional determinants, which tend to persist in the long run.

As to the effects of privatization, more research is needed to understand the profound consequences of divestiture in Western Europe. However, on the basis of the existing evidence, we can tentatively conclude that the effects at the macroeconomic level have been important especially in terms of stock market development.

The microeconomic effects of privatization are instead less visible, both in terms of the performance of privatized firms and corporate governance structures. First, the financial and operating performance has apparently improved in the aftermath of privatization. However, only limited efforts have been displayed to quantify these improvements using private firms as benchmarks, and to isolate the possible sources of these improvements. Indeed, it is not clear whether they stem from the additional monitoring role played by the stock market, from intentional structural reforms, or from the dilution of government ownership.

As to ownership and control in privatized companies, the empirical literature has provided solid evidence that privatization in Western Europe has been partial and incomplete. In most cases privatization it did not entail a dramatic change in governance structures as private ownership and public control actually seem to coexist.

The final question that we raise is the following: is the coexistence of private ownership with public control just a transient European anomaly, or a functional pattern of governance?

Providing tentative answers to this question is certainly an important avenue for future research, both on the theoretical and empirical side. For the time being, we conjecture that genuine privatization (i.e. the transfer of ownership and control to the private sector) appears difficult to achieve and sustain as several conditions must be met. First, markets should be competitive or suitably regulated. Second, private investors should be adequately protected by the law in order to avoid expropriation. Third, political institutions should be designed to limit the veto power of constituencies ousting full divestiture. Last but not least, governments should be credibly committed not to interfere post-privatization in the operating activity of the companies. Finally, and more cynically, the financial incentives for full divestiture may be limited if governments stakes in privatized firms turn out to be valuable for shareholders, since special benefits could be targeted to (partially) privatized firms.

The most recent trends document a strong resurgence of privatization activity in Europe, especially through public offering of shares to retail investors. European governments, severely hit by the global economic crisis and envisaging fiscal operations to improve budgetary figures, have once again resorted to privatization sales. The positive outlook in stock markets and investor's appetite towards high quality stocks have certainly been key drivers in the resumption of the process. It is certainly hard to predict whether this new trend represents the beginning of a new cycle or simply a re-adjustment after a negative shock. Certainly, the stage of increasing returns of privatization is probably over, and this makes privatizing the "second tranche" a difficult challenge for European governments.

Table 1. Privatizations around the world: revenues and transactions by geographic areas (1977-2004)

Area	Privatization Transactions			Privatization Revenues		
	Total Deals	%	PO/ Deals	Total Revenues	%	PO/ Revenues
Western Europe	1,183	0.29	0.36	647,647.75	0.48	0.73
Asia	569	0.14	0.53	322,349.60	0.24	0.85
Latin America	501	0.12	0.14	154,499.00	0.11	0.21
Oceania	200	0.05	0.08	88,237.78	0.07	0.36
CEECs & Former Soviet Union	1,145	0.28	0.12	84,471.25	0.06	0.25
North America & Caribbean	115	0.03	0.21	24,187.56	0.02	0.57
MENA	185	0.05	0.61	20,767.39	0.02	0.64
Sub Saharan Africa	156	0.04	0.30	7,9300.07	0.01	0.33
Total	4,054	1.00	0.28	1,350,090.40	1.00	0.64

Source: Elaboration on *Securities Data Corporation*.

Note: In our classification *Western Europe* includes: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey and the United Kingdom; *North America and the Caribbean* include: Barbados, Belize, British Virgin, Canada, Dominican Republic, Haiti, Honduras, Jamaica, Netherlands Antilles, Nicaragua, St Lucia, Trinidad, Tobago and the United States; *Latin America* includes: Argentina, Bolivia, Brazil, Chile, Columbia, Ecuador, El Salvador, Guatemala, Guyana, Mexico, Panama, Paraguay, Peru, Uruguay and Venezuela; *Sub Saharan Africa* includes: Benin, Cameroon, Chad, Congo, Ethiopia, Gabon, Ghana, Guinea, the Ivory Coast, Kenya, Lesotho, Malawi, Mali, Mauritius, Mozambique, Nigeria, Rwanda, Sao Tome, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Uganda, Zambia, Zimbabwe; *the Middle East and North Africa (MENA)* include: Algeria, Bahrain, Egypt, Israel, Jordan, Kuwait, Lebanon, Mauritania, Morocco, Oman, Qatar, Tunisia; *Asia* includes: Armenia, Bangladesh, Cambodia, China, India, Indonesia, Japan, South Korea, Malaysia, Pakistan, the Philippines, Singapore, Sri Lanka, Taiwan, Thailand; *Oceania* includes: Australia, Fiji, French Polynesia, New Zealand, Papua New Guinea; *Central-Eastern Europe and the Former Soviet Union* include: Albania, Bosnia, Bulgaria, Croatia, the Czech Republic, Czechoslovakia, East Germany, Estonia, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russian Federation, Slovak Republic, Slovenia, Soviet Union, Ukraine, Uzbekistan, Yugoslavia.

Table 2. Privatizations in Western Europe (1977-2002)

This table reports the aggregate figures on privatization in Western European countries for the 1977-2002 period. Countries are ranked by *Rev/GDP*. *Deals* is the total number of privatizations; Revenues is Total Revenues from Privatizations for the period 1977-2002 (in US\$ mil 1995); *Po/Deals* is the ratio of the number of privatizations by Public Offer to the total number of privatizations; *PO/Rev* is the ratio of revenues raised through Public Offers of Shares to Total Revenues from privatizations; *Rev/GDP* is the ratio of total revenues cumulated in the period to 2002GDP (in US\$ mil 1995); *SOE/GDP* is the ratio of the SOE value added to GDP (in US\$mil 1995) reported the year before the first privatization; *Rev/SOE* is the ratio of Revenues (in US\$mil 1995) reported the year before the first privatization, when possible.

Country	Deals	Revenues	PO/ Deals	PO/ Rev	Revenues/ Deals	Rev/GDP	SOE/GDP	Rev/SOE
Portugal	78	25,453.65	0.51	0.80	326.33	0.19	0.15	1.87
United Kingdom	183	145,531.73	0.32	0.88	795.26	0.11	0.11	1.40
Finland	56	16,328.63	0.43	0.66	291.58	0.10	----	-----
Italy	103	96,442.39	0.44	0.84	936.33	0.08	0.09	0.86
Spain	74	46,577.60	0.35	0.79	629.43	0.06	0.09	1.01
Sweden	56	18,625.54	0.20	0.70	332.60	0.06	0.10	0.73
Austria	51	11,503.06	0.57	0.51	225.55	0.04	0.14	0.52
Netherlands	29	19,182.48	0.38	0.66	661.46	0.04	0.06	1.15
France	97	59,875.26	0.53	0.92	617.27	0.03	0.11	0.48
Germany	150	73,302.53	0.14	0.66	488.68	0.03	0.10	0.79
Belgium	10	5,707.97	0.20	0.18	570.80	0.02	0.04	0.69
Mean	81	47.139.17	0.37	0.69	534.12	0.07	0.09	0.95
Median	74	25.453.65	0.38	0.70	570.80	0.05	0.10	0.82

Source: Elaboration on *Securities Data Corporation, World Development Indicators (World Bank 2002)*, and *World Bank 1995*.

Table 3. Financial Markets Development Indicators (1985, 2000)

	Market Capitalization					Volume of Trades				
	1985	2000	1985	2000	Difference (a) – (b)	1985	2000	1985	2000	Difference (c) – (d)
	Mkt. Cap (as % of GDP)	Mkt. Cap (as % of GDP)	Mkt. Cap. of Privatized Companies as a % of Total Mkt. Cap (a)	Mkt. Cap. of Privatized Companies as a % of Total Mkt. Cap (b)		Turnover Ratio	Turnover Ratio	Value of Trades of Privatized Companies as % of Total Volume of Trades (c)	Value of Trades of Privatized Companies as % of Total Volume of Trades (d)	
Austria	5.00	15.00	2.00	34.00	32.00	23.00	33.00	1.00	49.00	47.00
Belgium	0.00	1.00	1.00	8.00	8.00	11.00	23.00	1.00	11.00	10.00
Finland	9.00	236.00	1.00	14.00	12.00	10.00	72.00	2.00	20.00	18.00
France	11.00	99.00	26.00	83.00	57.00	25.00	84.00	3.00	35.00	32.00
Germany	18.00	64.00	4.00	22.00	18.00	55.00	89.00	4.00	15.00	11.00
Italy	10.00	62.00	17.00	41.00	24.00	33.00	117.00	2.00	34.00	32.00
Portugal	16.00	53.00	36.00	57.00	21.00	17.00	96.00	19.00	61.00	42.00
Spain	14.00	74.00	34.00	56.00	21.00	44.00	238.00	30.00	66.00	36.00
Sweden	30.00	136.00	1.00	6.00	6.00	31.00	125.00	3.00	18.00	15.00
United Kingdom	63.00	171.00	15.00	16.00	1.00	24.00	75.00	7.00	11.00	4.00
Average	17.60	91.10	13.70	33.70	20.00	27.30	95.20	7.20	32.00	24.70

Source: Elaboration on *Word Bank (2003)*, and *Datastream*.

Table 4. Results from three empirical studies on the financial and operating performance of newly-privatized firms

This table summarizes the empirical results of three directly-comparable academic studies [Megginson, Nash and van Randenborgh (1994), and D'Souza and Megginson (1999)] comparing the three-year average operating and financial performance of a combined sample of 133 newly-privatized firms with the average performance of those same firms during their last three years as state-owned enterprises (SOEs). All three studies employ the Wilcoxon rank sum test (with its z-statistic) as the test of significance for the change in median value. All three studies employ multiple proxies for most of the economic variables being measured; this table summarizes only one proxy per topic, and emphasizes the one highlighted in the studies (almost invariably, the variable that uses either physical measures--such as number of employees--or financial ratios using current-dollar measures in the numerator or denominator, or both). Profitability, investment, leverage, and dividend measures are in percent. Efficiency and output measures are index values, with the value during the year of privatization defined as 1.000; inflation-adjusted sales figures are used in the efficiency and output measures.

Variables and Studies cited	Obs	Mean value Before Privatization	Mean value After Privatization	Mean change due to Privatization	Z-Statistic for Difference in Performance	% of Firms with improved of Performance	Z-Statistic % change
PROFITABILITY (Net Income÷Sales)							
Megginson, Nash and van Randenborgh (1994)	55	0.0552 (0.0442)	0.0799 (0.0611)	0.0249 (0.0140)	3.15***	69.1	3.06***
D'Souza & Megginson (1999)	78	0.14 (0.05)	0.17 (0.08)	0.03 (0.03)	3.92***	71	4.17***
EFFICIENCY (Real Sales per Employee)							
Megginson, Nash and van Randenborgh (1994)	51	0.956 (0.942)	1.062 (1.055)	0.1064 (0.1157)	3.66***	85.7	6.03***
D'Souza & Megginson (1999)	63	1.02 (0.87)	1.23 (1.16)	0.21 (0.29)	4.87***	79	5.76***
INVESTMENT (Capital Expenditures Sales)							
Megginson, Nash and van Randenborgh (1994)	43	0.1169 (0.0668)	0.1689 (0.1221)	0.0521 (0.0159)	2.35**	67.4	2.44**
D'Souza & Megginson (1999)	66	0.18 (0.11)	0.17 (0.10)	-0.01 (-0.01)	0.80	55	0.81
OUTPUT (Real Sales (adjusted by CPI))							
Megginson, Nash and van Randenborgh (1994)	57	0.899 (0.890)	1.140 (1.105)	0.241 (0.190)	4.77***	75.4	4.46***
D'Souza & Megginson (1999)	85	0.93	2.70	1.76	7.30***	88	10.94***
EMPLOYMENT (Total Employees)							
Megginson, Nash and van Randenborgh (1994)	39	40,850 (19,360)	43,200 (23,720)	2,346 (276)	0.96	64.1	1.84*
D'Souza & Megginson (1999)	66	22,941 (9,876)	22,136 (9,106)	-805 (-770)	-1.62	36	-2.14**
LEVERAGE (Total Debt Total Assets)							
Megginson, Nash and van Randenborgh (1994)	53	0.6622 (0.7039)	0.6379 (0.6618)	-0.0243 (-0.0234)	-2.41**	71.7	3.51***
D'Souza & Megginson (1999)	72	0.29	0.23	-0.06	-3.08***	67	3.05***
DIVIDENDS (Cash Dividends Sales)							
Megginson, Nash and van Randenborgh (1994)	39	0.0128 (0.0054)	0.0300 (0.0223)	0.0172 (0.0121)	4.63***	89.7	8.18***
D'Souza & Megginson (1999)	51	0.015	0.04	0.025	4.98***	79	5.24***

*** Indicates significance at the 1 percent level
 ** Indicates significance at the 5 percent level
 • Indicates significance at the 10 percent level

Source: Megginson, 2003.

Table 5. Percentages of capital sold in European privatizations (1977-2003)

This table reports aggregate figures on privatization in major Western European countries for the 1977-2003 period. Countries are ranked by Average percentage of Capital Sold. *Deals* is the total number of privatizations.

Country	Deals	Average percentage of capital sold	Average percentage of capital sold through PO	Average percentage of capital sold through PS
United Kingdom	186	89.92	73.84	96.95
Germany	156	78.08	29.31	84.99
Sweden	59	77.44	33.45	87.73
Ireland	17	65.20	38.35	73.46
Spain	80	63.65	30.01	79.22
Netherlands	32	60.64	24.92	82.08
Norway	34	59.95	34.16	76.07
France	114	59.26	37.81	75.99
Portugal	81	55.24	36.02	75.46
Italy	124	54.71	29.40	70.70
Finland	58	54.59	17.70	81.43
Denmark	9	46.14	32.71	68.53
Austria	58	45.70	32.73	61.77
Belgium	11	41.88	33.30	43.79
Mean	73	60.89	34.55	75.58

Source: Elaboration on *Securities Data Corporation*.

Table 6. Type of Largest Shareholder in Privatized Firms

Data for 141 privatized firms are used to construct this table. The table presents the percentage of firms controlled by different controlling owners, using 10% ownership as the threshold. Controlling shareholders are classified into six types. State: A national government (domestic or foreign), a local authority (county, municipality, etc.), or a government agency. Family: A family (including an individual) or a firm that is unlisted on any stock exchange. Widely held financial institution: A financial firm (SIC 6000-6999) that is defined as widely held because no shareholder controls 10% or more of the votes; held at the control threshold. Widely held corporation: A non-financial firm, widely held using the control threshold. Cross-holdings: The firm Y is controlled by another firm, that is controlled by Y, or directly controls at least 10 percent of its own stocks. Miscellaneous: Charities, voting trusts, employees, cooperatives, or minority foreign investors. Companies that do not have a shareholder controlling at least 10 percent of votes are classified as widely held. ^a, ^b, and ^c denote statistical significance at the .01, .05, and .10 levels, respectively.

Privatized Firms										
Time period	N° of firms	State	Family	— of which:		Widely held corp.	Widely held financial	Miscell.	Cross-holdings	Widely held
				<i>Identified families</i>	<i>Unlisted firms</i>					
End of 1996	141	34.75	16.31	2.84	13.48	2.84	17.02	1.42	0.00	27.66
End of 2000	141	29.79	19.86	2.84	17.02	4.26	9.93	4.96	0.71	30.50
Diff '00-'96		-4.96 ^b	3.55	0.00	3.55	1.42	-7.09 ^b	3.55 ^b	0.71	2.84
T-stat		-2.14	1.04	0.00	1.09	0.82	-2.27	2.27	1.00	0.78

Source: Bortolotti and Faccio, 2004.

Table 7. Ultimate Control Rights in Privatized Firms

Data relating to 141 privatized corporations and 141 matching firms are used to construct this table. Control rights is the percentage of voting rights ultimately controlled by the largest controlling shareholder. Government control rights is the percentage of voting rights controlled by the Government as the largest shareholder. Private control rights is the percentage of voting rights controlled by the largest shareholder in firms matching those in which the Government is the largest controlling shareholder. Firms using control enhancing devices denotes the percentage of government-controlled firms (or matching peers) in which the controlling shareholder enhances his/her voting power by using pyramids, multiple control chains and/or dual class share structures. Pyramids occur when the controlling shareholder owns one corporation through another which he/she does not totally own. Firm Y is held through multiple control chains if it has an ultimate owner who controls it via a multitude of control chains, each of which includes at least 5% of the voting rights at each link. Dual class shares occur when firms have outstanding stocks with different voting and/or cash flow rights. a, b, and c denote statistical significance at the .01, .05, and .10 levels, respectively.

Panel A: Privatized Firms					
Country	Number of firms	Mean	Median	Government Control Rights	Firms using control enhancing devices
End of 1996	141	27.80	19.99	51.27 (N=49)	53.06% (N=49)
End of 2000	141	25.51	16.16	52.18 (N=42)	52.38% (N=42)
Diff '00-'96		-2.29			
T-stat		-1.26			
Panel B: Matching Firms					
Country	Number of firms	Mean	Median	Private Control Rights	Firms using control enhancing devices
End of 1996	141	21.10	11.92	15.67 (N=49)	30.61% (N=49)
End of 2000	141	26.37	13.40	17.76 (N=42)	33.33% (N=42)
Diff '00-'96		5.27 ^b			
T-stat		2.13			
Panel C: Difference between Privatized and Matching Firms					
Country		All Firms (Mean)		Government-Controlled Firms	
<i>Diff end 1996</i>		6.70 ^b		35.50 ^a	
T-stat		2.37		9.10	
Diff end 2000		-0.86		34.42 ^a	
T-stat		-0.28		7.80	

Source: Bortolotti and Faccio, 2004.

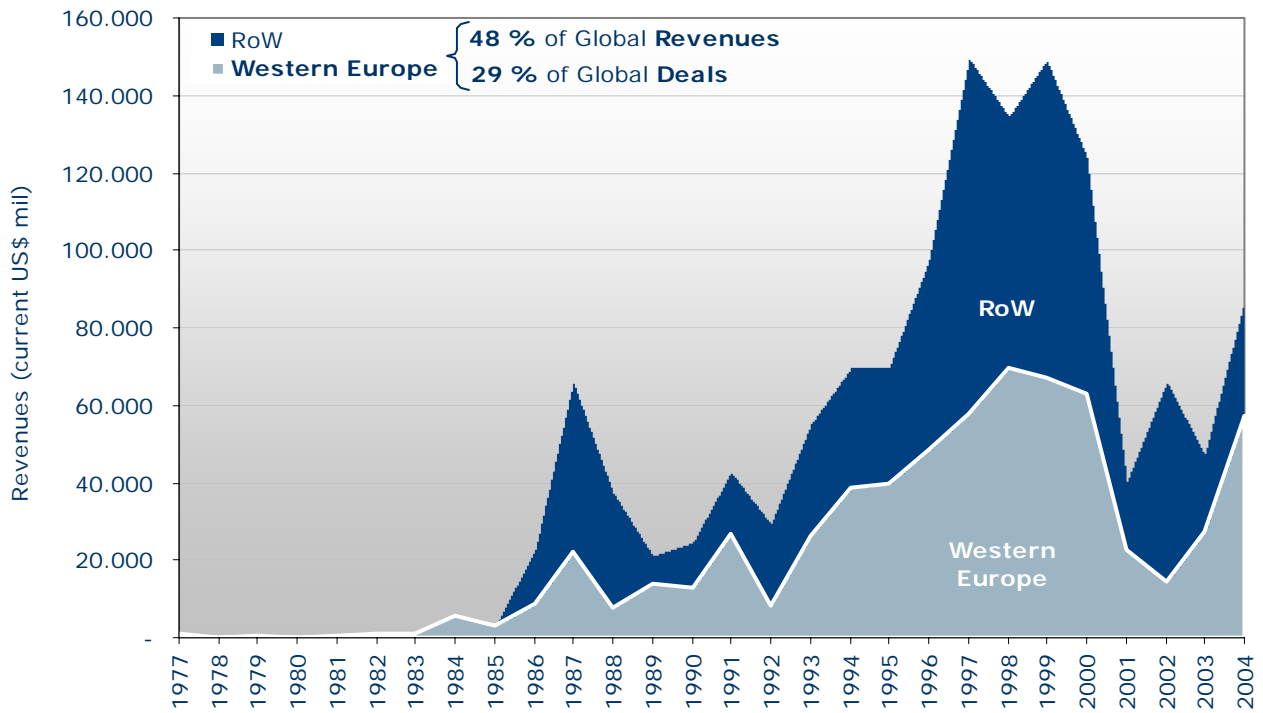
Table 8. Country Distribution of Privatized Firms by Control Type

Gov't Controlled firms are those whose largest shareholder (at the 10 percent threshold) is a national government (domestic or foreign), local authority (county, municipality, etc.), or government agency. *Golden share* is a dummy that takes the value of 1 if the Government enjoys special powers or there are statutory constraints in privatized companies.

Country	Obs	Obs. in the Country as % of all Privatizations	Gov't Controlled (as of end '96)	Golden Share (as of end '96)	Gov't Controlled or Golden Share (as of end '96)	Gov't Controlled or Golden Share as % of Privatiz. in the Country (as of end '96)	Gov't Controlled (as of end '00)	Gov't Controlled or Golden Share (as of end '00)	Gov't Controlled or Golden Share as % of Privatiz. in the Country (as of end '00)
Austria	11	7.80	9	2	9	81.80	9	9	81.80
Belgium	2	1.40	1	1	2	100.00	1	2	100.00
Denmark	2	1.40	2	1	2	100.00	1	1	50.00
Finland	4	2.80	4	1	4	100.00	4	4	100.00
France	20	14.20	6	5	9	45.00	5	8	40.00
Germany	10	7.10	5	2	5	50.00	5	5	50.00
Greece	2	1.40	2	1	2	100.00	2	2	100.00
Ireland	2	1.40	0	2	2	100.00	0	2	100.00
Italy	12	8.50	6	6	8	66.70	4	7	58.30
Netherlands	3	2.10	1	1	1	33.30	1	1	33.30
Norway	6	4.30	3	2	3	50.00	2	3	50.00
Portugal	9	6.40	1	4	4	44.40	1	4	44.40
Spain	5	3.50	2	2	3	60.00	1	3	60.00
Sweden	3	2.10	2	1	2	66.70	1	1	33.30
Turkey	3	2.10	0	2	2	66.70	0	2	66.70
United Kingdom	24	17.00	0	17	17	70.80	0	17	70.80
Whole sample	118	100	44	50	75	70.9	37	71	64.9

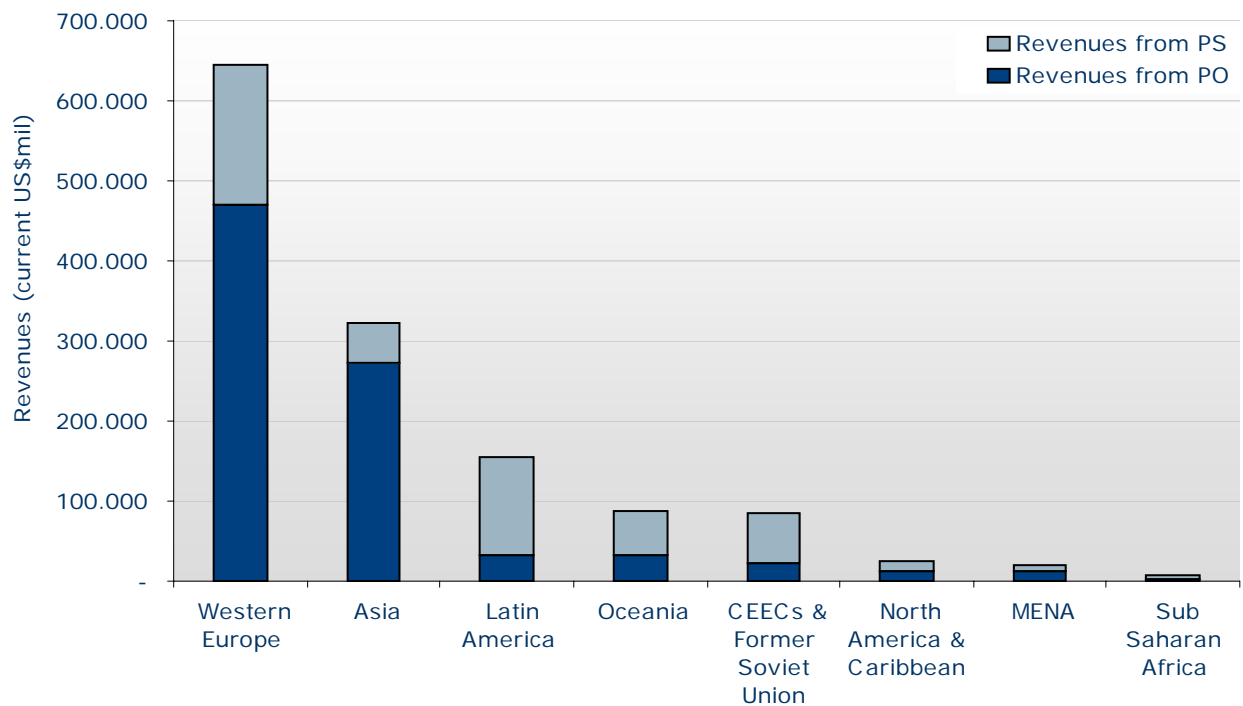
Source: Bortolotti and Faccio, 2004.

Figure 1. Revenues in Western Europe vs Rest of the World (1977-2004)



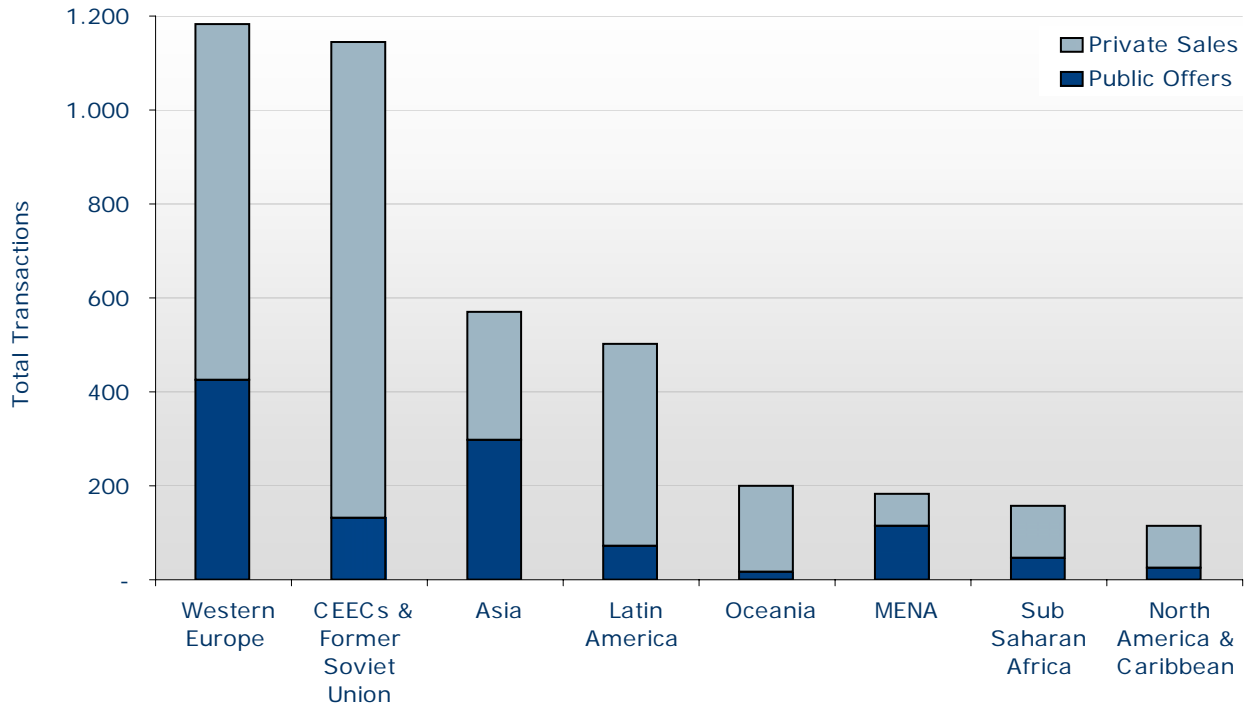
Source: Elaborations on *Securities Data Corporation*.

Figure 2. Privatizations around the World: ranking by revenues (1977-2004)



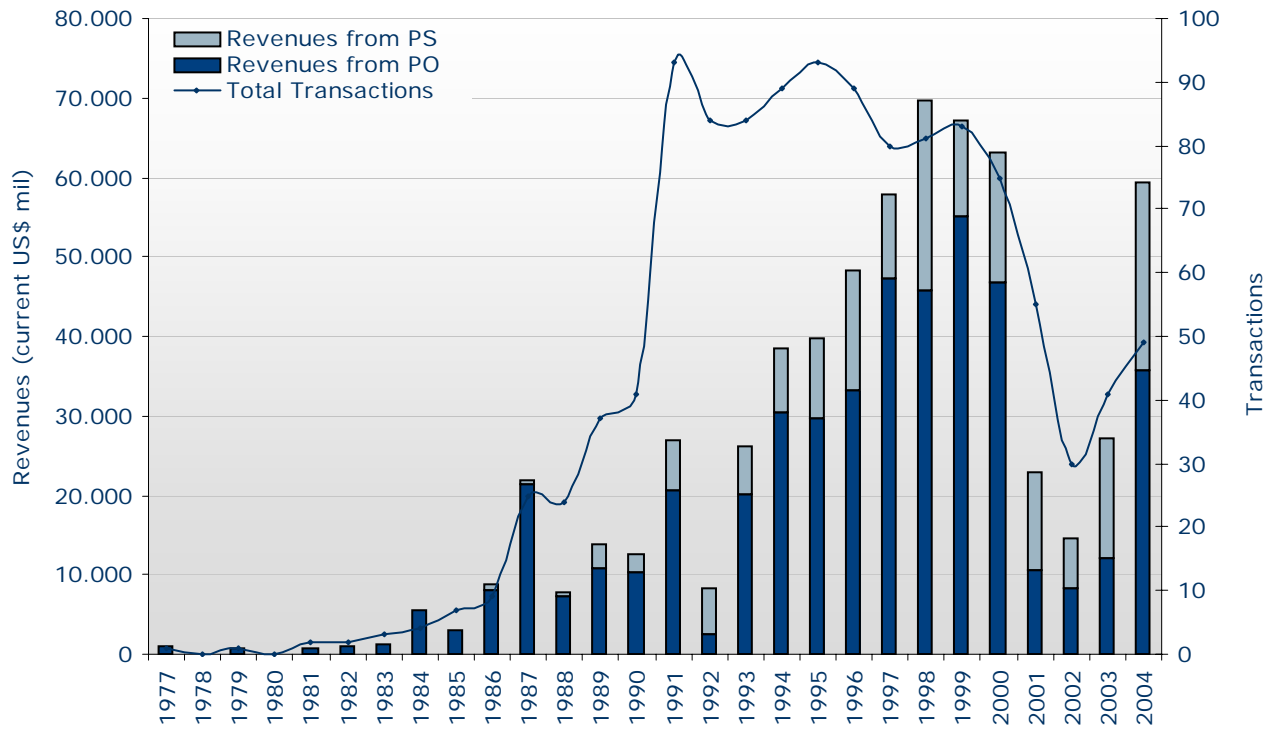
Source: Elaborations on *Securities Data Corporation*.

Figure 3. Privatizations around the World: ranking by transactions (1977-2004)



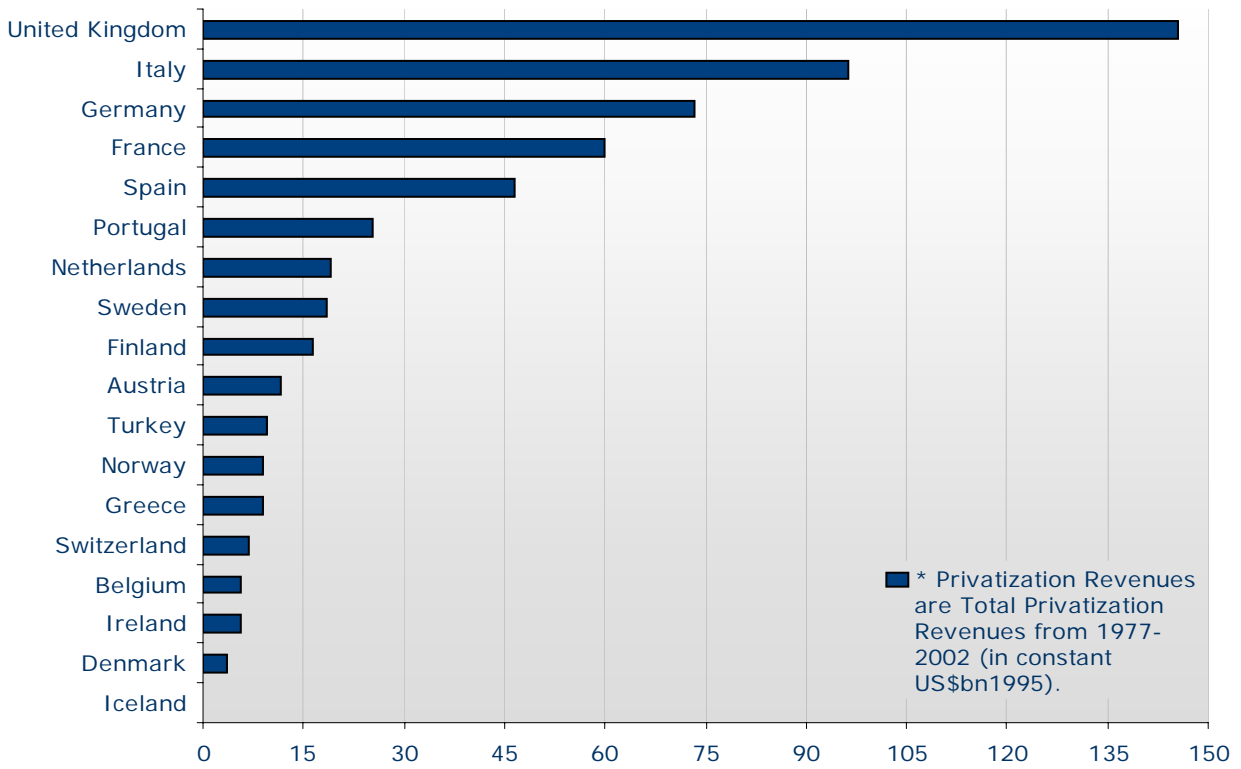
Source: Elaborations on *Securities Data Corporation*.

Figure 4. Privatization in Western Europe: Total Revenues and Transactions (1977-2004)



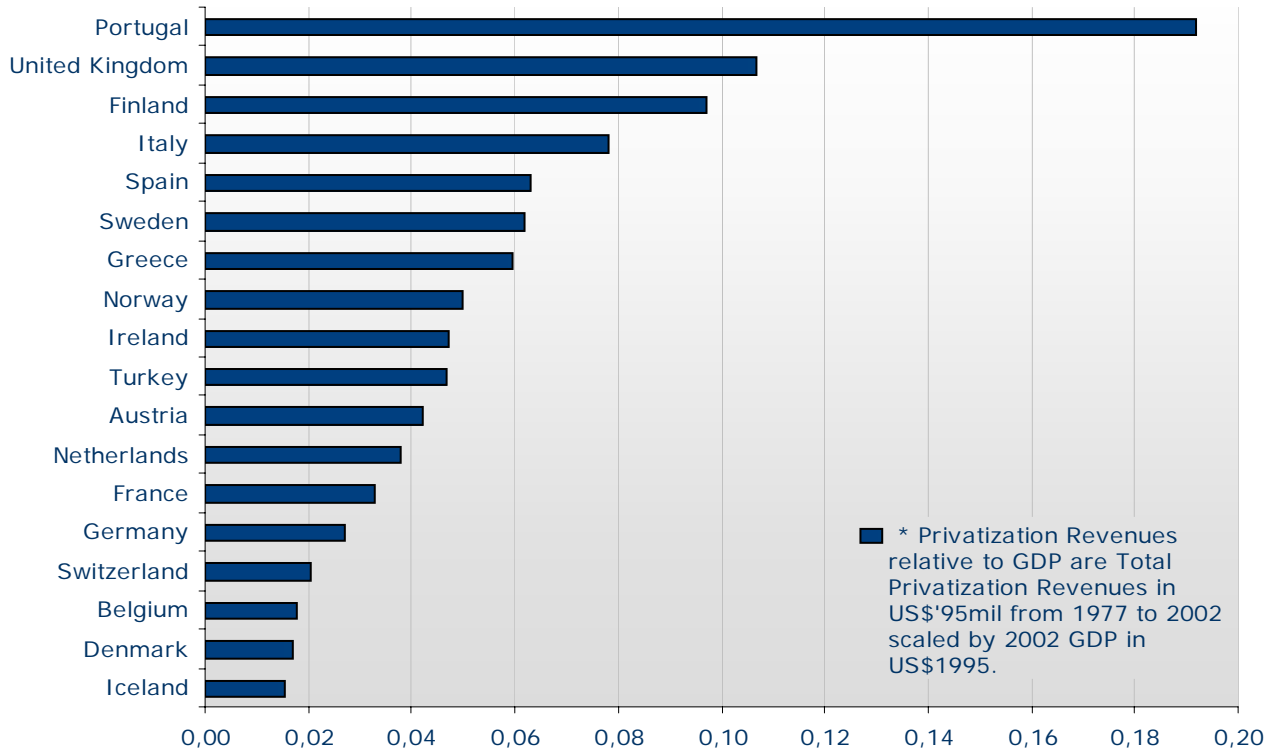
Source: Elaborations on *Securities Data Corporation*.

Figure 5. Privatization in Western Europe: Country Ranking by Revenues (1977-2002)*



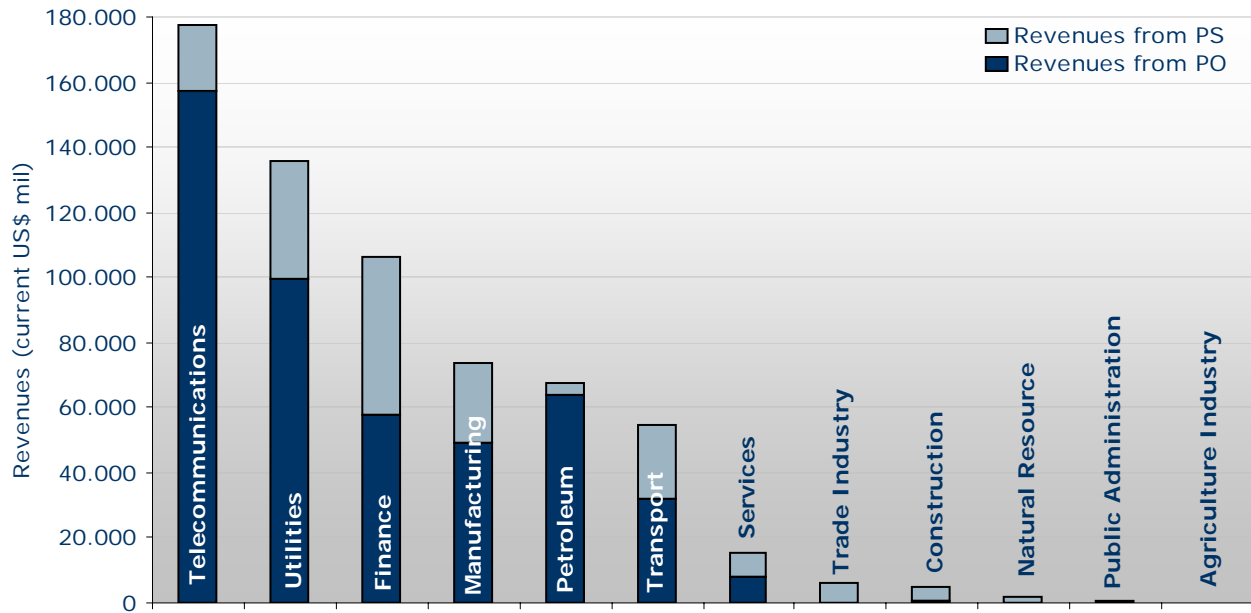
Source: Elaboration on *Securities Data Corporation*, and *World Bank*.

Figure 6. Privatization in Western Europe: Country Ranking by Revenues relative to GDP *



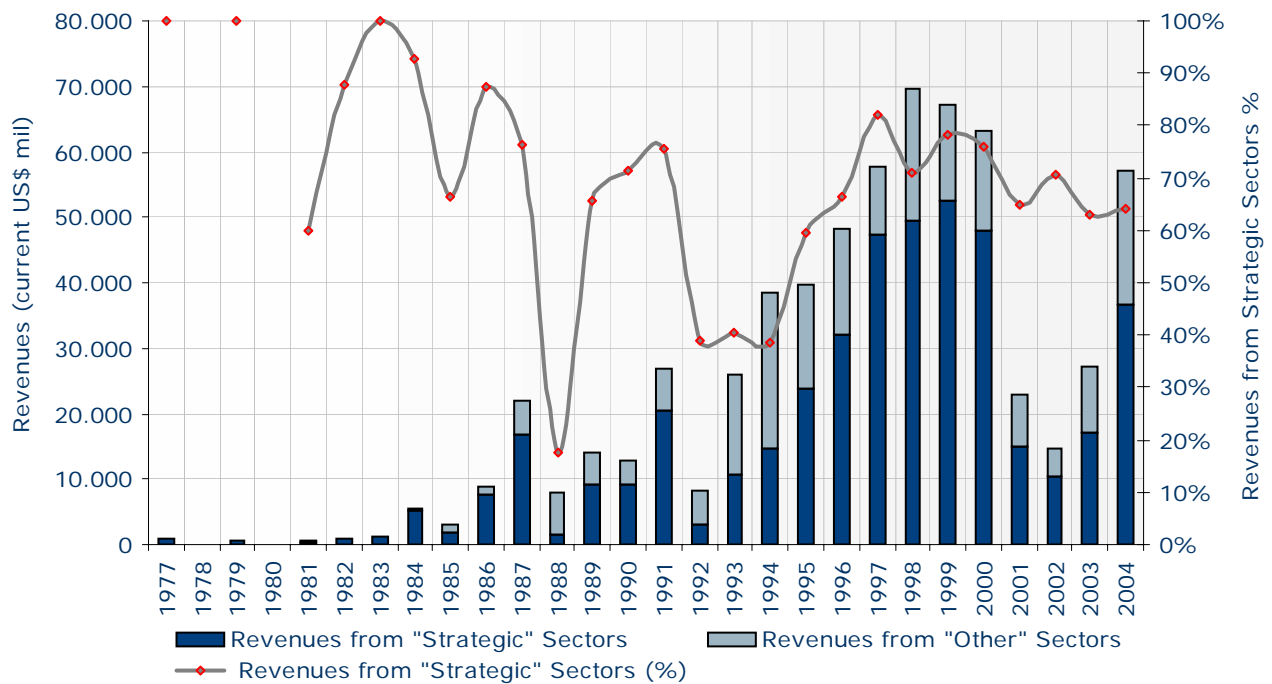
Source: Elaboration on *Securities Data Corporation*, and *World Bank*.

Figure 7. Privatization in Western Europe: Distribution of Revenues by Sector (1977-2004)



Source: Elaborations on *Securities Data Corporation*

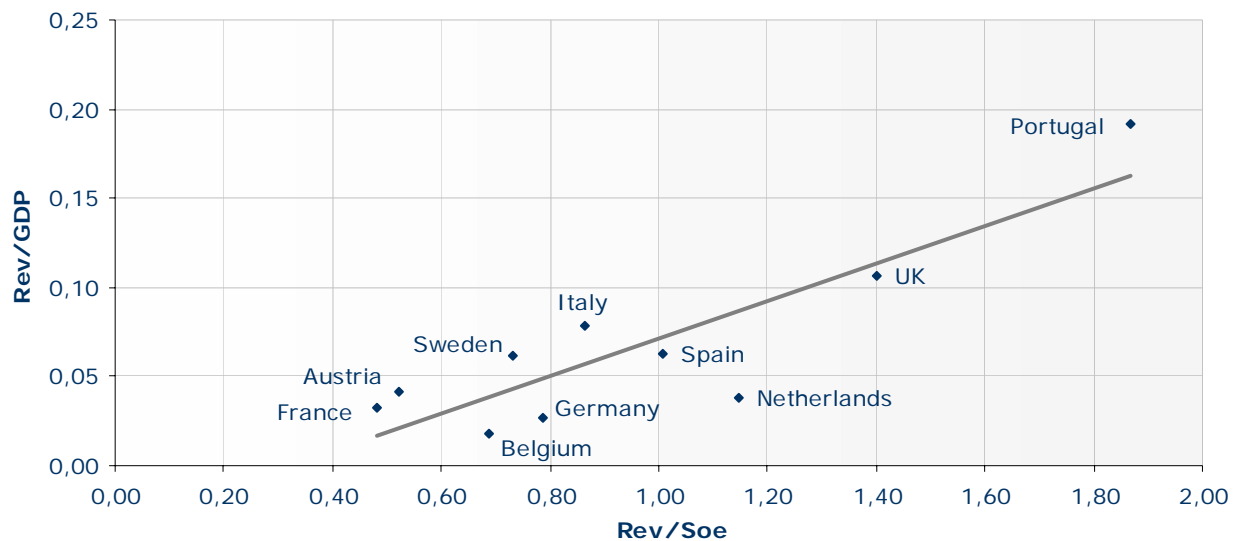
Figure 8. Strategic vs Other Sectors (1977-2004)



Source: Elaboration on *Securities Data Corporation*.

* **"Strategic" Sectors** include: Telecommunications, Utilities, Transportation industry, and Petroleum.
"Other" Sectors include all the other sectors.

Figure 9. Privatizations in Western Europe: Revenues/GDP and Revenues/SOE (1977-2002)



Rev/GDP is the ratio of Total Revenues cumulated in the period '77-'02 to '02GDP (in US\$mil 1995).

REV/SOE is the ratio of Revenues to the SOE value added reported in the year before the first privatization (in US\$mil 1995), when possible.

Source: Elaboration on *Securities Data Corporation*, and *World Bank*.

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