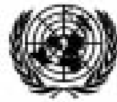
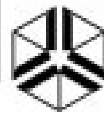

Discussion Paper No. 2002/16

Hardening a Soft Budget Constraint Through 'Upward Devolution' to a Supranational Institution

The Case of Italian State-Owned Firms and the European Union

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Abstract

This paper contributes to the literature on the role of decentralization in hardening the budget constraint of public enterprises. Following Qian and Roland the study adopts a 'federalist' approach. However, it interprets federalism as the *upward* devolution of domestic economic policies to a supranational authority and examines its role in disciplining public enterprises operating in a soft budget regime. The methodology is a case study of the shift in budget regime in Italy in the late 1980s. The study shows that a determinant role in driving this shift was played by European economic policies. The discipline imposed by participation in the EMS, the Single Market Programme and, later, the requirements to enter the EMU pushed the Italian government toward a much tougher approach to its budget deficit.

The case study identifies a macroeconomic and a microeconomic channel through which the supranational institution—the European Commission—pressurised both the Italian government and the state-held corporate sector. It analyses the effects of the upward…/…

Keywords: public enterprises, soft budget constraint, state aid, European integration, Italy, federalism

JEL classification: E62, G28, L32, H32, H61, O19

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devolution on the hardening of the budget constraint of Italian public enterprises and provides empirical evidence of their restructuring and improved performance. Finally, the study extends the lessons from the case study to other countries and supranational institutions by examining two questions. First, to what other contexts the upward devolution of economic policies may be applied. Second, why supranational pressure might work where domestic reforms prove ineffective.

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1. Introduction

A firm's budget constraint is soft when financial discipline is relaxed, funding is easily obtainable in distress and bankruptcy is an unlikely threat. Although the soft budget constraint syndrome tends to be associated with centralized economies and state ownership, to impose a budget constraint credibly binding, that is, not followed ex post by financial concessions in case of difficulties, proves difficult to do also on private firms and financial institutions in market economies. The literature on the disciplining role of debt and related moral hazard (e.g. Jensen, 1986; Hart and Moore, 1995) is rooted in the soft budget constraint syndrome (Maskin and Xu, 2001). The 'too large to fail' and 'too many to fail' literature also raises the issue of how to avoid a soft budget constraint resulting from rescue operation to avoid systemic risk (see Goodhart and Schoenmaker, 1995; Mitchell, 1998).

The soft budget constraint syndrome can be looked at from either of its complementary sides.[1] On the source of funding side, the problem is a lack of firm commitment. The funding institution (for example a bank, the shareholders or the government), even after having set strict ex ante financial conditions, finds itself unable—for economic or political reasons—to stick to them once the firm runs into trouble. It relaxes them, allows renegotiation and provides new funding. If the commitment not to intervene is regularly broken, credibility and reputation are weakened. In other literatures this has been called a time inconsistency problem (see Kydland and Prescott, 1977). On the recipient of funding side, an agency problem arises (see, for example, Bardhan and Romer, 1992). Once managers suspect that the commitment is not binding, they have an incentive to behave as if the commitment were weak. The resulting moral hazard leads to excessive managerial discretion (Bertero and Rondi, 2001).

For transition economies, Maskin and Xu (2001) show that a way to mitigate the negative effects of a soft budget constraint is the decentralization of the financial system. Decentralization works in hardening the budget constraint because it makes ex post renegotiations more difficult. Other authors argue that it works because it creates competition (Berglof and Roland, 1998). Qian and Roland (1998) interpret decentralization as federalism, that is the organization of government involving some fiscal decentralization. Their model shows that devolving taxing and spending authority *down* to competing local governments, while monetary authority is kept at the federal government level, creates a three-level hierarchy which hardens the soft budget constraint of local state-owned firms. They use the Chinese experience to illustrate how this works.

This paper contributes to the literature on the role of decentralization in hardening the budget constraint and, in particular, adopts the 'federalist' approach. However, we interpret federalism in a different way. We consider federalism as the result of the devolution of economic policies *upwards* to a supranational authority.[2] What works in disciplining

[1] After Kornai's seminal contribution, a recent literature has formalised various aspects of the soft budget constraint. See, for example, the symposium in the *Journal of Comparative Economics* Vol.26, 1998.

[2] Although the word devolution is commonly used to mean 'downward devolution' and, in particular to mean the surrender of powers to local authorities by a central government, its proper definition, from the Latin

public enterprises, we argue, is the result, which is the same: a three-level hierarchy in which the monetary (or other) authority of the top level keeps in check the fiscal policy of the next level, which becomes constrained itself in its ability to provide funding to state enterprises. The policies imposed by a supranational institution, maximizing the social welfare of an international constituency, when applied as rules with little discretion, constrain the budget of national governments and of domestic firms. These rules prevent the time inconsistency of governments due to domestic political and economic factors and create the discipline that governments lack to avoid reneging on previous commitments.

The paper also contributes to the literature on the organization of government and the role of multiprincipals—in our case the first principal is above the jurisdiction of domestic governments—as a disciplinary device (Persson et al., 1997; Martimort, 1996; Tirole, 1994).

The methodology we use is a case study. We analyse the hardening of the budget constraint of Italian state-owned firms[3] in the late 1980s.[4] We identify the financial discipline imposed by a range of economic policies of the European Union as the determinant factor in the change of budget regime for public enterprises. In other words, we identify this devolution of power upwards, to the EU, as the mechanism that mitigates both aspects of the soft budget constraint syndrome. In the case of China it is the devolution of power downwards to local governments that creates the federal structure and it is the consequent competition among them for financial resources that works (Qian and Roland, 1998; Sun, 1999). And in the case of China the federal government's monetary policy includes the distribution of grants to local governments. In our study it is the devolution *upwards* of monetary policy and of competition policy to a supranational institution, the EU, that creates the federal structure. And, because the mechanisms operate in a market economy, it is the monetary, fiscal and competition rules that, forcing national governments to operate on a level playing field, create discipline.

Another contribution of this study is that it examines the behaviour of state-owned firms in a market economy, in contrast to most of the literature on the soft budget constraint which examines public firms in developing and transition economies. Analysing the changes in the budget constraint of public enterprises in the Italian economy, as opposed to economies in which firms are under administrative control, allows a good understanding of the phenomenon. Firms' boundaries (Maskin and Xu, 2001) are clearly drawn by the market in which these firms, together with private ones, operate.

The aim of the paper, by analysing the case of EU institutions and Italian firms, is to identify a mechanism whose working can be generalized to wider contexts. Indeed, the power of supranational institutions in tightening the budget constraint of state firms applies

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word *devolvere*, is the transference of rights, powers, property, or responsibility to another, in whatever direction.

[3] In this paper the terms public firms, public enterprises (commonly used in the public economics literature) and state-owned firms, state-owned enterprises (commonly used in the transition economics literature) are all used interchangeably to mean firms whose majority shareholder is the government. In contrast, we use the term private firms to mean firms not owned by the government (and *not* to indicate firms not quoted).

[4] Identifying a switch of budget regime for Italian public enterprises in the late 1980s also challenges the common wisdom that major changes for Italian public firms only started with the 1990s privatization programme.

to a number of supranational institutions and their policies (e.g. IMF, the World Bank, the World Trade Organization) and to many firms in transition, developing and market economies.

This paper is part of a research programme into the financial discipline of public enterprises. In two previous studies, Bertero and Rondi (2000) and Bertero and Rondi (2001), we provide econometric evidence on the *effects* of the hardening of the budget constraint on the performance and investment decisions of a panel of Italian public enterprises. Our findings show its disciplinary effect on the productivity, employment and on the managerial discretion of these firms after a switch of regime which, for our econometric work, we place in 1987. In this paper we explore in detail how that switch of regime came about and we generalize to other context the supranational mechanism that triggered it.

In Section 2 we discuss the soft budget constraint with respect to state ownership. In Section 3 we identify the macroeconomic and microeconomic policies devolved to the European Union. In Section 4 we introduce the early history of Italian state firms and their soft budget constraint. In Section 5 we analyse the effects of this devolution on tightening the budget constraint of public enterprises and, in turn, the empirical evidence of these effects on their restructuring and performance. Section 6 extends the findings of the case study to other contexts. Section 7 concludes the paper.

2. State ownership and soft budget constraint

For private firms it is their relative size, the sector in which they operate or its maturity (Jensen 1986) that may make them more prone to the soft budget constraint syndrome. For public enterprises it is the discretionary nature of their budget constraint that makes them vulnerable to the inefficiencies of a soft regime. The economic rationale for government intervention in the form of ownership is rooted in the theory of market failure and in welfare economics. Market failures are a result of market imperfections, such as externalities, public goods, natural monopolies due to increasing returns to scale, imperfect information, imperfect mobility of factors, incomplete markets. State-owned firms are meant to 'counterbalance' these market imperfections but this implies that the simple maximization of shareholders' wealth under a hard budget constraint is inappropriate for them. By definition, public firms have multiple objectives and multiple principals, and operate under a number of variable constraints (Tirole, 1994). [5] This makes their behaviour

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[5] Among the objectives, the promotion and protection of employment has always been important for public enterprises. Recent studies have shown how economists underestimate the benefits of public spending. They tend, for example, to miscalculate the benefits of 'employment overuse' and see it purely as inefficient because it lowers profits (DiTella, 1997; Oswald, 1997; Ng, 1999 for China). Andrew Oswald (1997) shows that in Western countries well-being rises hardly at all with increases in real GDP, whereas the biggest source of unhappiness is unemployment. Policies aimed purely at increasing growth are unlikely to fundamentally change well being (and underestimate the benefits of high employment), whereas reducing joblessness would. Ng (1999) discusses how 'in industrialized countries, well-being appears to rise as real national income grows. But the rise is so small as to be sometimes almost undetectable. Unemployment, however, seems to be a large source of unhappiness. This suggests that governments ought to be trying to reduce the amount of joblessness in the economy. In a country that is already rich, policy aimed instead at raising economic growth may be of comparatively little value'. This puts in a different perspective the pursuit of the employment objective by public enterprises and a purely financial evaluation of their performance.

rather complex and their performance more difficult to assess (Lawson, 1994). For example, among the multiple objectives of public enterprises are regional growth and industrial development, particularly in certain industries, which justifies the presence of state ownership even in competitive sectors. It is recognized that state ownership was successful with respect to *these* objectives in several Western European countries in the post-World War II period, exactly because it allowed industrialization in its early stages to be driven by criteria other than profits (Shonfield, 1977; Posner and Wolf, 1967; Holland, 1972, Borghini and Podesta, 1987; Maraffi, 1990; Barca and Trento, 1997).

State ownership can also be a corporate governance solution to the conflict of interest between ownership and control, especially when the private sector is unable to provide risk capital (see Barca and Trento, 1997). State-owned equity has also the advantage of avoiding the undesirable volatility and contagion characteristics of foreign capital, which, nowadays, is often the only alternative for many transition or developing countries. In sum, state ownership has a specific economic rationale. And from the very definition and multiple objectives of a public enterprise, its use as a policy tool means that its budget constraint is unlikely to be set purely on financial grounds and be hard and inflexible at all times.[6]

However, a common current perception is not that public firms successfully maximize a number of objectives and that therefore they need some flexibility in their budget constraint. The perception is that their budget constraint is so soft that it ends up being a vehicle for serious allocational inefficiencies and corruption (see, for example, Shleifer and Vishny, 1994). What distinguishes their soft budget constraint to produce these unwanted effects?

Government intervention towards state firms can be classified into two categories: it can be delivered with non-discretionary instruments (e.g. subsidised loans) or with discretionary instruments (e.g. injections of endowment funds in case of distress). The first affects ex ante allocation of resources and incentives (see Hart et al., 1997). The second affects ex post allocational efficiency. It is only in the second case that the soft budget constraint syndrome arises. In other words, if public enterprises were only helped with, for example, non-discretionary subsidies allocated on fixed financial rules, the government would be able to commit itself ex ante and managers would not expect to be bailed out, but would adjust accordingly their ex ante strategy.

What distinguishes the soft budget constraint of public enterprises lies in the *nature* of its discretionality which affects both aspects of the soft budget constraint syndrome discussed in the previous section. Time inconsistency is a common problem for public enterprises because the initial financial constraint and its subsequent relaxation often come from the *same* principal, the shareholder/government or its banks, with which the firm has close administrative links.[7] In other words, in the terminology of Maskin and Xu (2001), public

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[6] Che's (2001) model and application to the Chinese economy highlights a trade-off between incurring the problems of the soft budget constraint syndrome discussed here and hardening the budget constraint of state firms at all costs. The latter solution may indeed have destabilizing macroeconomic effects because it may prevent some of the objectives of state ownership itself.

[7] There have been attempts by governments to create rules to avoid time inconsistency, for example in the UK the 1967 White Paper (marginal cost pricing) and the 1976 External Financing Limits and in the US the automatic budget rules.

enterprises face a centralized credit market. Moreover, not only it is the same principal, it is also a principal with which the firm has a vertical and subordinate relationship (Kornai, 1998) and it is also the principal that requires them to maximize a range of objectives, of which profitability is just one.

Although managers in public firms require high standards of accountability and public scrutiny, the moral hazard problem, can also be particularly serious for public enterprises because they face a more complicated nexus of agency problems due to their multiple principals—taxpayers, government, several ministries.[8] Also their administrative proximity and interdependence with politicians can lead to collusion in maximizing party-political and vote-seeking objectives (see Bertero and Rondi, 2001). So the problem with the discretionality of the soft budget constraint of public enterprises is that it lends itself to abuse for political, vote-seeking objectives. The absence of a credible financial discipline and the easy, repeated access to government funding on the basis of disputable objectives (beyond the economic ones described above), have built a reputation of inefficiency and corruption for state-owned firms in transition, developing and market economies leading to unsustainable allocational inefficiencies. How can the soft budget constraint syndrome be 'cured'? For private firms the solution revolves around hardening their budget constraint and around making bankruptcy risk credible. For example, a change in capital structure may create the necessary discipline and harden the budget constraint (Jensen, 1986). The random rescue of failing private banks has been suggested as a way to avoid moral hazard (see Maskin and Xu, 2001).

For state firms, in so far as ownership is itself a cause, privatization is one answer. 'It was widely maintained at the outset of the post-socialist transition that the "Holy Trinity" of liberalization, privatization and stabilization would suffice to produce an efficient market economy' (Kornai, 2001:1,591). But the debate on the Russian and Chinese models of transition show that ownership is only part of the problem and that therefore privatization is only part of the answer. Even in market economies, the *de facto* renationalization of Railtrack in the UK and the collapse of the electricity industry in California suggest that privatization per se does not necessarily create the right financial incentives.[9] Another possibility, 'a task of equal rank' with privatizations (Kornai, 2001:1,591; 2000), is to devise ways to harden the budget constraint of public enterprises. In other words, to constrain both government and firms to maximize the legitimate objectives of social welfare and/or profitability and in this way to improve performance. This paper concentrates on this 'cure'.

3. Upward devolution to the European Union and pressure on governments and firms

The particular medicine we identify for this cure is the devolution of some domestic economic policies to a supranational institution. This devolution results in a three-tier

[8] See Laffont and Tirole, 1993; Tirole, 1994; Shleifer and Vishny, 1994; and Prendergast, 2000.

[9] Railtrack paid 9.7% dividends to shareholders, reached a gearing ratio of 130% and failed to invest in safety. The privatized California electricity industry failed to deliver the required services (see Joskow, 2001 for the electricity crisis). Both cases show that the soft budget constraint syndrome does not disappear just because of privatization and also that the simple maximisation of shareholders' wealth is too simplistic a rule, independently of ownership, when complex objectives and incentives need to be taken into account.

hierarchy similar to the one modelled in Qian and Roland (1998) with public firms at the bottom. It mitigates the time inconsistency problem of domestic governments by creating fixed constraints on their budgets and on their policies. This pressurises public enterprises to the point of causing a switch of budget regime.

The first part of our case study is the study of those policies devolved by European governments to the European Union that ultimately affected the budget constraint of public enterprises. In this section we identify the two channels through which devolution occurred: a macroeconomic and a microeconomic channel. The macroeconomic channel worked, indirectly, through the reduction in government deficit that took place in the late 1980s. It consisted of the exchange rate policies of the European Monetary System and, eventually, the monetary and fiscal policies driven by the European Monetary Union. The microeconomic channel worked on public enterprises directly through regulation of state transfers and interventions of the European Commission. Here the determinant policy the implementation of the Single Market Programme within a competition policy framework.

3.1 Upward devolution of macroeconomic policies: exchange rate, monetary policy and fiscal rules

In the 1970s the average gross public debt to GDP ratio in OECD countries increased by ten percentage points, productivity growth declined and inflation accelerated. By the end of the decade, this seemingly uncontrolled public sector growth started to be seen in a new light.

> 'Rationales for reform developed to a large extent from the experiences of the 1970s, when the coincidence of slowing economic growth, rising structural unemployment and accelerating inflation began to persuade governments that the usual goals of economic policy were no longer being served by a continuing expansion of the public sector. Governments turned towards greater self-restraint as evidence accumulated that higher taxes and budget deficits could contribute to allocative distortions which reduced long-run growth potential'. (OECD, 1989:156)

Attention became narrowly focussed on the fact that the public sector could not be disciplined by market forces and that, therefore, allocating further resources to it would be inefficient. Pursuing fiscal and monetary discipline began to be seen as the central objectives of government policy. This new perspective implied giving priority to the reduction of budget deficits.

Although primarily the result of European dissatisfaction with the post-Bretton Woods international monetary system, the European Monetary System (EMS) did become operational in this international policy climate, on 1 January 1979. External and internal monetary stability were its main goals. External stability would be achieved through a sophisticated mechanism to keep multilateral exchange rates within bands and therefore to reduce volatility. Internal monetary stability would be obtained, indirectly, by maintaining the exchange rate within those bands and lowering inflation rates, thus 'sharing' the credibility of the Bundesbank consistent record. In turn this meant that fiscal policy and, therefore, government deficit had to be restrained (see, for example, Gross and Thygesen, 1992).

There were various ways in which the EMS exercised pressure on domestic monetary, fiscal and structural policies. One was through the negotiations for the EMS realignments.

Each negotiation implied, among other things, reassessing the effect of inflation on exchange rates and therefore of the success of governments in curbing inflation and reducing its deficit. This procedure exercised supranational pressure—gently, but regularly—to reduce EC countries large budget deficits and high inflation rates, as a precondition to remain within the EMS. Another area of pressure arose from the impossibility of using 'competitive devaluations' once participating in the EMS. Exchange rates within fairly narrow bands implied that boosting exporting firms' competitiveness through recurrent devaluations, a policy widely used in certain countries, could not be done any longer. This drew attention to the structural reforms necessary to reduce costs of production instead, such as reforms of the labour market and pension system.

In 1989 the gentle pressure became an ultimatum with the Delors report. Precise figures were released for the required ratios between deficit and GDP—less than 3 percent—and between debt and GDP—less than 60 percent—for entry in the European Monetary Union and with the Maastricht Treaty, signed in December 1991, governments committed themselves to meet these targets by 1997. With the Stability and Growth Pact signed in 1997 (Regulation No.1466/1997), another precondition for entry, they committed themselves to keeping their budget deficit within 3 percent, or incur a fine.[10]

Devolving the exchange rate policy through the EMS and then monetary policy through preparations for EMU severely constrained the fiscal policy of member states. This devolution of macroeconomic policies forced a reduction of the budget deficit and, consequently, greatly reduced the resources for financial support to public enterprises. 'Wasting resources' by sustaining public firms' soft budgets became no longer politically acceptable.

3.2 Upward devolution of microeconomic policies: competition policy, state aids regulation and the Single Market

Within the above macroeconomic environment, the microeconomic channel worked in a direct way. In this section, we analyse the EU competition policy and the monitoring and restricting of state transfers to public enterprises. The European Commission's concern over the anti-competitive effects of state interventions dates back to the Treaty of Rome (1957), but its attitude towards state transfers became increasingly restrictive over time.

In the 1960s and 1970s controls on state aids were relaxed and not particularly effective (CER-IRS, 1992). A fundamental principle stated in the Treaty of Rome (1957) *prohibits* financial aid from individual governments to domestic firms of members of the European Communities because of its negative impact on competition.[11] However, in practice state aid was regulated through a system of applications for special status (Article 93) to the European Commission who decided whether a particular aid package was compatible with the Common Market, which was in most cases (see Cafferata, 1995; Besley and Seabright, 1999; Schina, 1987). It is interesting to note, also, that although it is common to associate

[10] The fine is between 0.2 and .05% of GDP for a deficit between 3 and 6% of GDP. Above 6%, it is 0.5% of GDP.

[11] Article 92(2)-(3) of the Treaty of Rome states the exceptions to this rule. For example, aid of a social character for individual consumers, aid to promote regional economic development or for rescue and restructuring and aid to reduce the impact of natural disasters are deemed compatible with the Common Market.

the granting of state aid with public enterprises, the original EC regulation of state aid, in the Treaty of Rome, was neutral with respect to the ownership or organization of firms (Ehlermann, 1992). The reason was to avoid discrimination among Member States with such an uneven distribution of state ownership.

In the early 1980s, as European economies were recovering from the economic and financial difficulties of the previous decade, competition policy within the Community acquired greater importance. In turn, attention became focused specifically on flows to state-owned firms. Whereas state aids to private firms were easily detectable, the aid content of the regular provision of endowment funds to state firms was difficult to ascertain. Hence, aids to state firms required to be treated as a special case. A path breaking Community Directive was issued precisely to improve 'the transparency of the financial relationships between member states and public enterprises' (80/273 EEC). It required Member States to ensure transparency in the size and objectives of their financial flows to state firms (Ehlermann, 1992; European Economy, 1999:61). The application of this Directive was extended in 1985 to public enterprises operating in water supply, energy, transport and telecommunications (Directive 85/413/EEC, see CER-IRS, 1992).

From the mid 1980s specific measures were taken to restrict state aids and, after a while, even the role of state ownership began to be questioned. The turning point was June 1984 when negotiations started for the Single European Act. Its aim was to create, among member states, a single market, i.e. 'an area without internal barriers in which the free movement of goods, persons, services and capital is ensured' (Article 8a). A White Paper, 'The Completion of the Internal Market', was published in March 1985 (the Cecchini Report), and the Single European Act was signed by Member States in February 1986. A few months later the Council agreed on a timetable—to be implemented by December 1992—for 279 detailed measures aimed at abolishing tariff and non-tariff barriers.[12] Although policymakers were mainly motivated by the hopefully positive macroeconomic effects of this project—higher growth, lower unemployment and inflation—the transmission mechanism was a microeconomic one. The Single Market was expected to strongly affect the entire European economy through cost savings—from the elimination of non-tariff barriers, and through increased competitive pressure—from its enlargement and integration. An effective competition policy at the EU level took paramount importance.

In this context state aid acquired a different meaning—they became an impediment to the success of the far reaching Single Market Programme. They came to be viewed as an implicit threat for the economic and social cohesion of the Community. The richer countries could afford more generous transfers within their economies and this could make ineffective the system of regional policies through Structural Funds (CER-IRS, 1992). Thus, at first, just monitoring the allocation of state aid to any firm became a precondition for the completion of the Single European Market. The request for information about the allocation of state aid became a permanent feature of the programme. As a result, the First Survey on State Aid (COM(88)945) was published in 1988, and has been regularly published since.[13]

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[12] These included frontier controls, national differences in technical regulations, the so-called fiscal frontiers from different tax levels and regimes, and public procurement biases in favour of domestic firms.

[13] 'As the market integration process progresses, this will naturally entail a strengthening of competition. There is a danger that Member States might react to this increased competition by granting more aid to

Soon after, however, attention again turned specifically to state firms. In 1988 the Commission required that Member States agreed upon a set of accounting standards to identify the content of aid within public transfers to public firms (CER-IRS, 1992). In 1991 a specific EC Communication (GUCE No.C273/1991) addressed the issue of size and quantity of state aids to public enterprises. On one hand, it required that public enterprises—with annual sales greater than ECU 250m—forward to the European Commission an annual report on the amount of public transfer from state agencies. On the other, it established the 'market economy investor principle' (MEIP) to evaluate whether public transfers to state-owned firms could be compatible with market competition.[14] This principle compares the terms in which the government provides funds to state firms to the terms under which a private financial investor would have provided the same funds in normal market conditions. The difference is classified as aid and subject to the approval of the Commission (see Harbord and Yarrow, 1999).

Finally, the next logical step in a process aimed at reducing the budget deficit, at increasing competition, and at reducing state aids defined by the MIEP, became a support for a reduction of public ownership. It started with a debate on whether the aid supplied for rescue and restructuring should have a privatization condition attached (Ehlermann, 1995) which implied that, at the EU level, privatization was seen mainly as a pre-requisite to ensure competition within the EU. And from the beginning of the 1990s the EU pressure to reduce aid became pressure to reduce state ownership (see also Parker, 1999; Cafferata, 1995).

> 'Additional progress is necessary in reinforcing competition rules, reducing state aid and reducing the role of the public sector. Privatization, to the extent that Member states judge it compatible with their objectives, could further the progress already made in this direction' (European Commission, 1995:15; in Parker, 1999:24).

4. Italian public enterprises: early years and the softening of their budget constraint

The second part of our case study examines how these EU policies affected Italian state-owned firms and contributed to a switch of budget regime. However, first it is necessary to understand how their budget constraint became soft in the first place, the related time inconsistency of the Italian government and the agency problems of public managers. In this section we explore these issues starting from the early years (1930s-1960s)—characterized by a healthy distance between public managers and politicians and a reasonably hard budget constraint (Section 4.1)—and continue with the developments in the 1970s and first part of the 1980s—characterized by excessive political interference and a soft budget constraint (Section 4.2).

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protect or promote national companies (…). Therefore the Commission will apply stricter criteria in its aid discipline, otherwise the positive benefits that should be fostered by the market integration will not be fully realised' (First Survey on State Aid, 1988:2). The Surveys do not report separately state aids to public enterprises.

[14] Recent academic contributions have called for a revision of the policy and for clearer, more encompassing criteria (Besley and Seabright, 1999).

4.1 The early and 'healthy' years (1930s-1960s)

The official birth date of state ownership in Italy is 1933 when, in the aftermath of the 1929 stock market crash, the Institute for Industrial Reconstruction (IRI) was created to bail-out major Italian banks and, in turn, the many industrial companies in their portfolios. But the historical and cultural roots of the public ownership of the Italian economy date back to the nineteen century, when the need for investment in financially demanding, capital-intensive technologies was not met by private investors who lacked the necessary resources and were high-risk averse.[15] These factors led to the birth of an industrial system heavily dependent on banks—which were allowed to provide both debt and equity, and therefore to mix financial and industrial interests—sustained by public procurement and protected by high tariff barriers (Barca and Trento, 1997).

When the stock market crashed in 1929, financially distressed industrial companies brought the banking industry on the verge of insolvency. To avoid it, the only possible reallocation of ownership, in the absence of a functioning market for corporate control, was towards the State.[16] State ownership in Italy was neither part of the fascist regime economic programme nor, as in the case of France and the UK, part of a planned nationalization policy. Most of the companies belonging to IRI were meant to operate within market conditions in competitive sectors, were incorporated as joint stock companies and participated in the Confederation of Italian Industry (*Confindustria*). IRI itself was incorporated as a holding company under private law. Although the Italian government had the oversight through the Ministry of Finance, IRI was directed by a team of technicians and professional managers who succeeded in remaining independent. IRI's objective was to restructure firms and then return them to the private sector. This policy objective reflected the interests of both private firms and of public policy.

However, after World War II, IRI's companies and banks were not privatized, for two reasons: the lack of private domestic capital for a massive privatization programme and the idea, shared by politicians and public managers, that these firms could be used to speed up reconstruction (Bottiglieri, 1984). And so, the initial objective set before the war was not pursued. This could be interpreted as the first instance of time inconsistent behaviour on the part of the government towards public enterprises. However, it was a very different government, a post-war, democratically elected one, whereas it was the fascist government that had set the pre-war objective.

The direct intervention of the State in the economy thus continued and expanded under the new democratic regime. For example, in 1953, a new public holding in the oil and gas industry, ENI, was created on the grounds that economic recovery and growth required

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[15] When the government led by the Count of Cavour planned the first ever railway, linking Turin (the capital of the Kingdom of Sardinia) to Genoa, no domestic company could afford to join the pool of international suppliers of rail stock and engines. Since no private entrepreneurs or bankers were willing to invest in the only existing Italian rail engineering company (which later took the name of Ansaldo), the government was forced to finance the project and it did it with a large bond issue that was placed to a pool of private banks. Thus the government financially supported the newly born 'private' rail stock industry (Scognamiglio, 2001).

[16] When IRI was set up its portfolio included more than 20% of the equity stock of all Italian limited liability companies (100% of defence related steel industry and coal mining, 40% of non-military steel, 90% of shipbuilding, 80% of rail engines, 30% of power generation, the three largest commercial banks, and the telephone service) (see Barca and Trento, 1997).

strong foundations in the energy sector.[17] Similarly to IRI, the managers of ENI were successful in safeguarding their independence from the political system and concerned themselves primarily with profitability, efficiency, as well as with the creation of a modern industrial system. The managers' appointment system was based on professional and technical skills and recruitment was decided by the top executives with no interference from politicians (Scognamiglio, 2001). As self-financing was assured by respectable profitability rates, investment projects were financed through bank loans, cash flows and, in limited amounts, equity (the so-called endowment funds, *fondi di dotazione*). The 'residual control rights' were in the hands of management (Barca and Trento, 1997).

Our assessment of these facts is that, in this first post-war period, Italian public enterprises operated under an appropriate, rather hard, budget regime. One of its components was the healthy distance between their management and the political power, which gave them the freedom to pursue profitability and growth. Other elements were the poor conditions of the Italian economy, the need for and effort to reconstruct, the backwardness of the industrial equipment, the lack of financial capital and the US intervention through the European Recovery Plan, which all contributed to a hard budget environment . Finally, the interests of politicians, eager to be re-elected on the basis of a successful economic performance, were aligned with those of the efficiency-pursuing public managers.

With reference to these early years, an extensive literature—particularly by British scholars, e.g. Shonfield, 1977, Posner and Wolf, 1967 and Holland, 1972, but also others, e.g. Maraffi, 1990—praised the management of Italian state-owned firms for their substantial contribution to the recovery of the Italian economy and even for reinforcing competition (Martinelli, 1981). They certainly paved the way for the incoming, unprecedented economic boom (the so-called *miracolo economico*) between 1958 and 1963.

4.2 Slipping into a soft budget constraint regime (1970s-mid 1980s)

We single out the set up of two new institutions as the beginning of a change in the relationship between public managers and political power. These two events mark the beginning of a period in which public enterprises were required to implement objectives that: a) were often incompatible, b) facilitated the creation of moral hazard problems.

First, in 1956 the Ministry for State Holdings was established with the mandate of translating into operational objectives for public enterprises the policy guidelines issued by the government. The new Ministry 'receives policy guide-lines formulated by the inter-ministerial organ established by the law and translates them into a complex action of orientation and supervision vis-à-vis the enterprises controlled by it: the agency performs a function of *harmonious mediation* [emphasis added] between the government and the management of individual enterprises' (Saraceno, 1977:415). Politicians, in particular the Christian Democratic party and its companion trade union (CISL) who promoted the new

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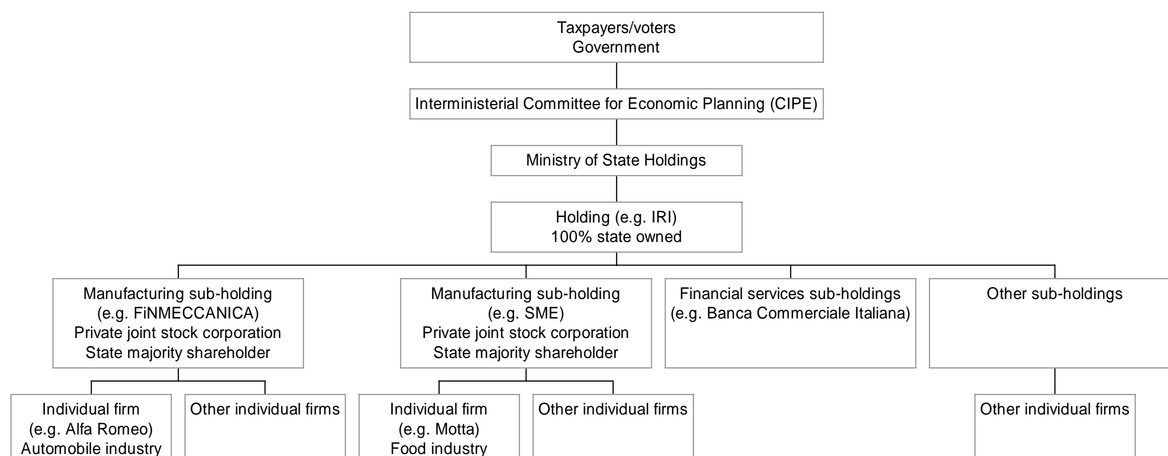
[17] However, the creation of ENI spurred the first strong opposition on the part of the private industrialists within the Confederation (*Confindustria*). The Christian Democratic Party played an important role in the ultimate decision to incorporate ENI as well as in the appointment of its far-sighted manager, Enrico Mattei. This backstage conflict and its political solution probably explain why, as early as 1953, the first strategically unrelated acquisition by ENI was the bail-out of a mechanical engineering company (Pignone), sponsored by the Christian Democrats.

Ministry, argued that state firms should take special interest in the development of Southern Italy and in the improvement of workers' conditions. However, at the same time, in that context, 'the obligation for the enterprises of the system to pursue the objective of profitability was affirmed' (Saraceno, 1977:414). A first sign of incompatibility came a year later when state enterprises left the Confederation of Italian Industry (*Confindustria*) and, from then on, engaged in collective wage bargaining with the trade unions separately from private firms.[18]

Chart 1
Corporate governance of Italian public enterprises



Second, in 1967 an Inter-Ministerial Committee for Economic Planning (CIPE) was set up. CIPE's immediate mandate was the implementation of the 1966-70 Economic Plan for Development, but its wider mandate was to set those economic and social objectives and investment policies that the Ministry for State Holdings would make operational for public holdings.[19] Chart 1 shows the resulting political dependent and multilayered structure of governance. On one hand, CIPE reconfirmed the principle of 'economic efficiency' (*economicità,* Saraceno, 1977) for the operations of public enterprises, but, on the other, it extended the objectives of state firms to comply with the industrial policy guidelines set up by the Economic Plan of the government. The two goals are not necessarily inconsistent if they are pursued for the benefit of the ultimate owners of public enterprises, the taxpayers. However, the result was that, whereas before it was the management who submitted projects for approval to the Ministry of Finance, from then on CIPE set the investment plans and the managers had to carry them out. This seemingly minor inversion of roles represented a major change in the decision making process, especially regarding 'acquisitions' strategies' (i.e. rescues of private firms) of public enterprises, a popular vote maximizing policy for certain politicians. It produced the major effect of transferring the

[18] Further 'unrelated' acquisitions (bail-outs) of loss-making private companies were conducted by ENI in 1959 (the newspaper '*Il Giorno*'), in 1962 (the textile company Lanerossi) and in the mid-to-late 1960s (more textile and clothing businesses). At the same time, IRI began to acquire a number of companies in the food industry (among the others, the *panettoni* producers Motta and Alemagna).

[19] In the meantime, new public holdings were created (EFIM, for mechanical and rail engineering, and mining, in 1962, EGAM, for steel and mining, in 1971, EAGAT). In 1962, the electric power industry was nationalized as the National Electricity Authority (ENEL).

‘residual control right’ from management to the political power.[20] Moreover, the deteriorating economic conditions of the early 1970s soon undermined the financial stability of the public holdings.[21] The initial low levels of endowment funds required debt financing, at increasing rates, for investment projects and for rescues of troubled firms and eventually forced public managers to ask repeatedly for new injections of funds. As public holdings became financially dependent on the government and Parliament, public managers became more and more dependent on politicians for strategic guidelines and operational objectives, as well as for recruitment and job security. A ‘party-political hidden shareholder’ emerged (Scognamiglio, 1981). And the complicated governance structure, a more ambiguous set of mutually inconsistent objectives,[22] and a general lack of transparency of economic and financial accounts,[23] made political pressures by vote-seeking politicians more difficult to resist.

Finally, another serious blow to public managers’ independence came with their dependence on politicians for top appointments. In 1978, a new law (Law No.14/1978) gave a Parliamentary Committee the mandate to appoint the Chairmen and Vice-Chairmen of public enterprises. This implicitly made acceptable that the top positions on Italian public enterprises would be split among the parties in the government coalition and allocated to party-sympathetic managers. Competence and experience were no longer necessary requirements for recruitment (see Grassini, 1981).[24]

Data on the size and type of public transfers to state holdings in those years mirror their greater dependence on state help and, as a consequence, on politicians. We bring together various sources to provide a picture of the increase of public transfers from the 1950s to the late 1980s. Figure 1 shows the transfers of endowment funds to IRI and ENI, the two main public holdings. The graph illustrates their modest size until the late 1950s—when public enterprises were operating under a reasonably hard budget constraint—their slow increase in the 1960s and early 1970s and their explosion in the late 1970s. Estimates from the OECD (1985) show that between 1965 and 1972, transfers to state firms equalled those to private firms as a percentage of GDP and amounted to 1.4 percent. By 1978 transfers to state firms had risen to 3.3 percent of GDP whereas subsidies to private firms had dropped to 0.7 percent. Data estimated by Brosio and Silvestri (1983) show that the share of total

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[20] A telling example of the conflict between the old guard of professional managers and the pervasive political power is the struggle between the general manager of Alfa Romeo, a motor vehicle company, and its direct shareholder, IRI, but indirectly, the political referees, over the market strategy and targeting of the new models and the industrial location of Alfasud. It ended up with the firing of the manager.

[21] Profitability and cash flows were eroded by high wages and salaries policy, by price controls and regulated tariffs (electricity, gas, telephone services), by rescues of loss-making private companies, and by rocketing interest rates, which, in the early 1970s, greatly increased the financial burden (Coltorti, 1990).

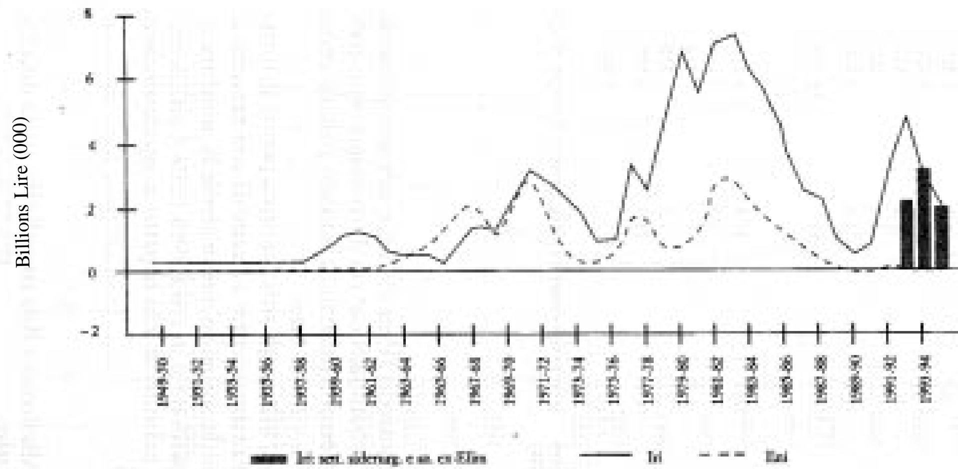
[22] The implicit shadow cost of pursuing ‘non-economic’ objectives was even certified by law (Law No.675/1977). Sate firms were thus required to estimate these costs arising from inefficiency (the so-called *oneri impropri*) that were then subsidised by the Treasury, a procedure which lent itself to abuse.

[23] Public holdings began to publish consolidated reports only around the mid 1970s. However, as no standard accounting or auditing principles existed, these reports were neither informative nor useful for consistent comparisons (Coltorti, 1990).

[24] For example, it was agreed and common knowledge that the IRI management would be the domain of the Christian Democrats and the ENI one of the Socialist Party.

state transfers to the industrial sector covered by transfers to public holdings rose from 6 percent to 46 percent over the decade 1970-9.

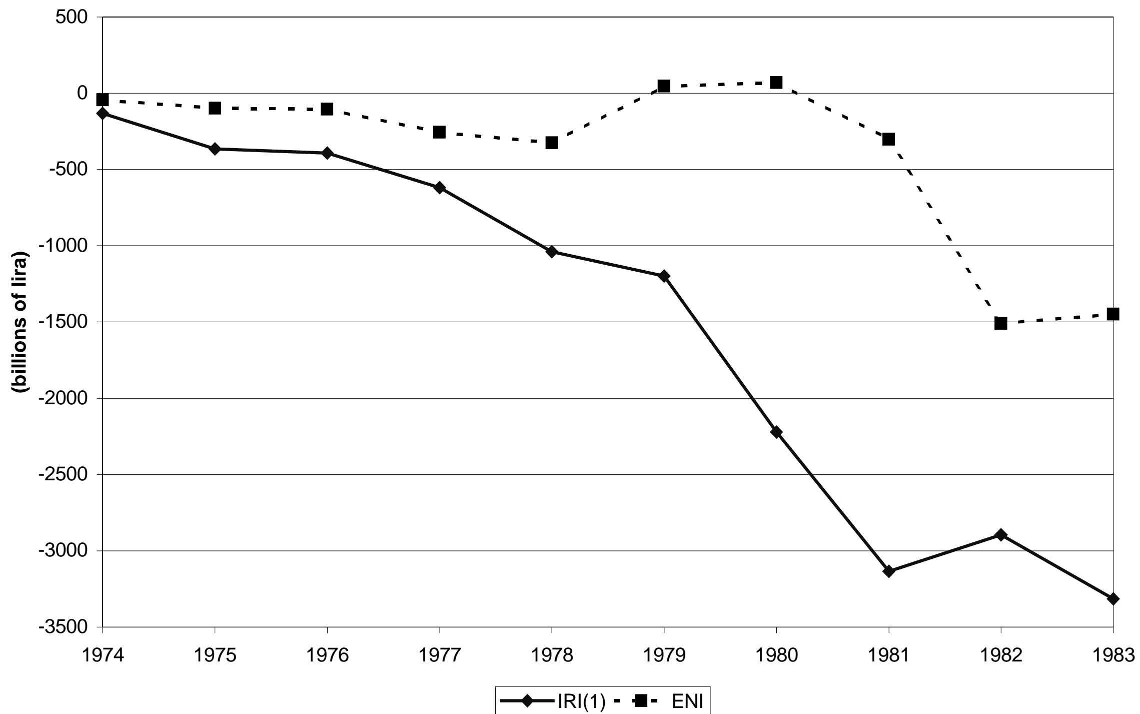
Figure 1
Government endowment funds to IRI and ENI



Source: Lo Passo and Macchiati (1998)

Note: two-year moving averages except for the period 1948-59, which is the mean value for the whole sub-period. Billions lire at 1995 prices. The government funds include flows to endowment funds, new debts and interests; the data for IRI include the subsidies for restructuring firms in the steel industry, in defence industry (former *Efim* subsidiaries) and sea transport industry.

Figure 2
Net income of public holdings in Italy



Source: consolidated Reports as reported in Coltorti (1990)

Note: (1) banks excluded

Figure 2 provides a picture of the effects of the factors we discussed on public holdings net results. By the end of the 1970s state enterprises' performance was characterized by huge losses, low productivity and high debt. In the early 1980s a deep recession made things worse. As the profitability of IRI and ENI further collapsed (IRI's deficit in 1981 was Lit.3,134bn, approximately 0.8 percent of the GDP), the new injections to their endowment funds became even larger (see Figure 1). From 1976 to 1983 the total endowment funds of IRI and ENI doubled as a percentage of GDP, from 1.8 to 3.7 percent. Accommodating endowment funds, high levels of State-guaranteed debt, political interference and collusion between managers and politicians, all contributed to create an environment that fits the definition that the literature gives to a 'soft budget constraint regime' in a market economy.

5. Effects of European policies on Italian public enterprises: mid 1980s-1990s

The circumstances above are the ones in which the European policies started exercising pressure in a different direction. The budget constraint of Italian public enterprises went from acceptably hard in the 1950s to unacceptably soft by the early 1980s. But the new equilibrium was unsustainable both economically, in a market economy, and politically, in a democratic regime. In this section we demonstrate how, during the late 1980s and early 1990s, changes occurred, at first slowly, and then at great speed. In our analysis, most changes were spurred by the European Community first and the European Union later.

Both macroeconomic and microeconomic channels worked together over time on the budget constraint of Italian public enterprises. They reduced the resources available to these firms and they forced a more efficient approach to their allocation. This led to a switch of their budget regime from soft to hard. In Section 5.1 we analyse qualitative and quantitative evidence of the switch of regimes. In Section 5.2 we bring together the available empirical evidence showing the effects on a number of variables of the switch of regimes.

5.1 Under a constrained macro and microeconomic environment: the switch of budget constraint

We first consider the effects of EU macroeconomic policies on the Italian government and on its financial resources; we then consider the effects of the EU microeconomic policies directly on Italian firms. Finally, we examine how the preparations for EMU took this process one step further and spurred a major privatization programme.

Macroeconomic channel: fewer resource available

On the macroeconomic side, the devolution of the exchange rate policy to the European level tightened the Italian government's budget and, as a consequence, the one of state firms. Italy became a member of the EMS from the very beginning in 1979. At the time it had among the largest deficits of member countries (10.6 percent of the GDP). Participating in the negotiations for EMS realignments created pressure on the Italian government to reduce this deficit. Between 1979 and 1987, the Italian government participated in eight such negotiations. Each one implied the discussion and assessment by other EMS partners of the effect of Italian high inflation on exchange rates and of the appropriateness of Italian policies to curb that inflation and to reduce the deficit, both preconditions to remain within the EMS. The forced exit of the Italian lira (and of the British pound) from the EMS years later, in 1992, shows that the threat was credible.

The other area of pressure generated by the EMS was the loss, in the export-led Italian economy, of the much used and popular policy of 'competitive devaluations'. These had meant a degree of freedom in policy making that had allowed the government to positively affect the external trade balance as well as to sustain the industrial sector. Without regular devaluations, exporting firms, a large and influential group in the Italian economy—that included several state-owned firms—were forced to undertake major restructuring to reduce production costs (see Barca and Magnani, 1989). Among these, particular attention became focussed on labour and pension costs. The relative lack of flexibility within the labour market, compared to the other European countries, began to be questioned (Emerson, 1988).

We report four facts, 'revolutionary' for Italy at the time, that we consider indicative examples of the effects of the pressure in the 1980s. First, in 1981 the so-called 'divorce' agreement between the Bank of Italy and the Treasury was approved. This released the Bank from the obligation to buy residual government bonds at issue. Second, in 1984 the automatic wage indexation mechanism was abolished and other measures were introduced to reduce employment-related costs for firms. Third, in July 1985, formal promises were made by the Italian government to reduce the budget deficit within the negotiations of the eighth realignment, when the lira was devalued by 8 percent against all other currencies. A number of measures were discussed to achieve this goal, for example reforming the pension system and increasing the tax burden. A reduction of subsidies to public enterprises was also among these. Fourth, in 1986, for the first time, two large state-owned enterprises, *Alfa Romeo* and *Lanerossi*, were privatized.[25]

Table 1 reports data on the government balances. It shows the effects of the macro pressure in the second part of the 1980s. Mainly as a result of a rising tax burden, the total deficit began to slowly decrease after 1985. Figure 3 shows that the rapid growth of public debt in the early 1980s also slowed down starting from 1986. Inflation, which averaged 14.1 percent in the 1981-5 period, also decreased to 5.9 percent from 1986 to 1990.

Microeconomic channel: smaller transfers, direct involvement and hard budget constraint

On the microeconomic side, meanwhile, the devolution of competition policy to the European level, particularly with the implementation of the Single Market Programme, forced the Italian government to adopt a more efficient approach to the allocation of resources to public enterprises. Greater allocational efficiency and reduced resources meant that, in the late 1980s, the budget constraint of these firms went from soft to hard. First we look at the EU policies and direct interventions to increase the efficiency of allocation of funding and then we look at the effects on the resources available to these firms.

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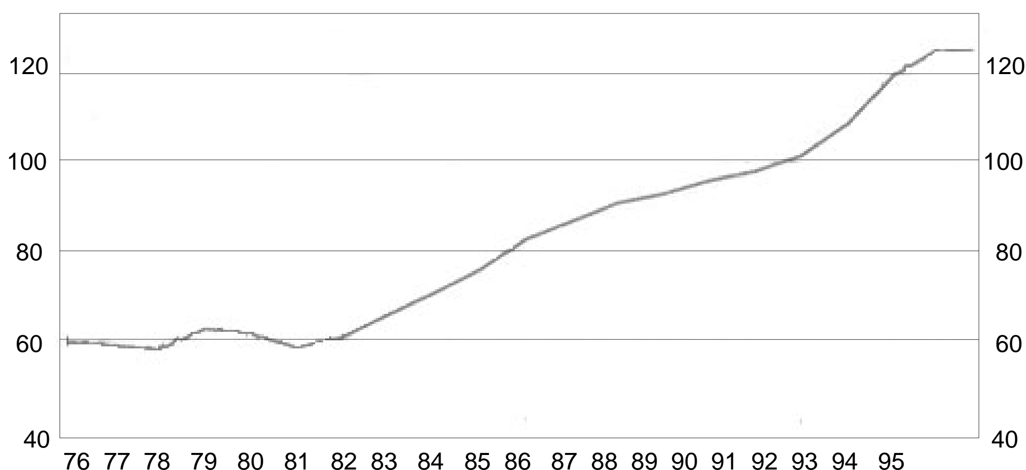
[25] Other sales (and purchases) of minority stakes in public enterprises also took place in those years. We interpret all these changes of ownership in that period as part of the process to harden the budget constraint of state firms. Those 'portfolio manoeuvres were part of the internal reorganization process in order to obtain more efficient and competitive companies and not part of a general programme of denationalization' (Bianchi, 1990:49). The proof of this is that the revenues from sales went to the state-holding and not to the Treasury. Another objective of these partial privatizations was the replacement of public funds (endowment funds and incentives for uneconomic investments) with private funds from the sales, which was a way for public managers to gain independence from political interference.

Figure 3
Italian public debt 1976-95 (as percentage of GDP)



Source: Bank of Italy, *Annual Report 1996*

We mentioned that from a 'normative' point of view, a change of attitude at EC level towards state aid to public firms came with the Directives on the transparency of financial flows to public enterprises. This regulation was particularly needed in Italy where a lack of transparency was a recognized issue for Italian public institutions. As mentioned in Section 4.2, the annual reports of public holdings were considered uninformative. And action in this respect, without EC intervention, would have been very difficult, given that the financial links between CIPE, the Treasury, the Public Holdings Ministry and political parties were complicated and non-transparent.

Another type of evidence of the EU direct pressure to rationalize, restrict and clarify state aid and of the difficulties of doing this by the Italian government, is provided by the frequent litigations between the Italian government and the European Commission over specific norms or firms' funding.

The following are examples, in a number of years, of the specific norms that the Commission regarded as anti-competitive and, therefore illegal, with respect to the definition of state aids at the time: the law 46/1982 for the Fund of Innovation and Applied Research (later approved); the law 64/1986 for broadly defined financial aid to regions in Southern Italy including transfers for private and state firms investing in the South (modified and then approved in 1988); the law 4239/1989, meant to provide tax relieves to firms involved in merger and acquisitions, and especially benefiting the merger between the chemical division of ENI and MONTEDISON in *Enichem* (incompatible with the Common Market); the law 317/1991 for financial support to small and medium firms (slightly modified and then approved).

Table 1

Italian Government Balances from 1980 to 1999 (as percentage of GDP)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1995[2]	1996	1997	1998	1999
Revenues[1]	30.6	31.7	34.2	36.0	35.0	34.8	35.2	36.0	36.6	38.2	38.8	39.7	42.0	43.4	40.6	40.6	45.6	45.8	48.2	46.6	46.9
Public Expenditure	42.5	46.7	49.0	50.5	50.2	51.1	49.7	49.2	49.4	50.5	51.9	52.5	54.3	55.6	52.5	50.9	53.2	52.9	50.9	49.4	48.8
of which: interests	*5.3*	*6.2*	*7.2*	*7.6*	*8.2*	*8.2*	*8.5*	*8.0*	*8.2*	*8.9*	*9.6*	*10.2*	*11.4*	*12.1*	*10.7*	*11.2*	*11.5*	*11.5*	*9.4*	*8.1*	*6.8*
Primary deficit (surplus)	3.6	5.4	4.5	3.5	3.6	4.1	3.2	3.0	2.5	1.0	1.1	0	-1.9	-3.0	-1.9	-4.1	-3.9	-4.4	-6.7	-5.3	-4.9
Total deficit	8.9	11.6	11.7	11.1	11.8	12.3	11.7	11.0	10.7	9.9	10.7	10.2	9.5	9.1	8.8	7.1	7.6	7.1	2.7	2.8	1.9

Source: Bank of Italy Annual Reports (various years)

Notes: [1]Tax burden and social security contributions. [2]The series from 1995 to 1999 apply the new version of the European Accounting System (SEC 95—Sistema Europeo dei Conti).

The most striking evidence of the EC involvement in the rationalization of the funding of public firms is its direct involvement in the *running* of Italian state enterprises. These hands-on interventions demonstrate the growing determination by the European Commission to prioritise competition and the objectives of the Single Market. They also show, however, an increased tendency to consider suspicious any capital injection by the state into public enterprises and, occasionally, some confusion on the exact rules to screen state aids applications (see Besley and Seabright, 1999).[26] To exemplify this process, we report six instances of intervention: the restructuring of *Finsider* (the IRI sub-holding running the steel industry), the *Lanerossi* and *Alfa Romeo* cases, the liquidation of *Efim* (the state holding for the mining and rail engineering sectors), the aid to *Enichem*, and, later on, the restructuring of *Alitalia*. Approval for the major restructuring plan for the steel division of IRI, *Finsider*, in 1987 had to come not only from the Italian government but also from the EC Competition Directorate. One of the conditions imposed by the EC's Directorate for Competition Policy (DG IV) was the quarterly monitoring of the achievement of financial targets by an external consulting firm (Kumar 1993). The restructuring brought about, for the first time, the shut down of several plants (twelve in three years) and the reduction of employment from 122,000 in 1980 to 76,000 in 1987. It led to the replacement of *Finsider* with ILVA.[27] *Finsider*'s liabilities were then transferred to IRI, but this could be done only after the approval of the EC.

In 1988, the EC stated that the financial aids the government had provided to *Lanerossi* (a large textile company within ENI group) from 1983 and 1987 were illegal and had to be paid back. Similarly, in 1989, the funds granted to a carmaker, *Alfa Romeo* (IRI), before it was sold to *Fiat* in 1986, were judged incompatible with the competition policy and had to be paid back (the litigation went on until 1991 and was resolved with a negative sentence by the European Court of Justice which applied both to *Lanerossi* and to *Alfa Romeo*) (CER-IRS, 1992). A part of *Efim*'s operating companies had been sold to private groups in 1985, in 1988 and 1990. The disastrous loss-making holding was eventually dissolved in 1992, but the liquidation was fully finalized only in 1997, as a result of several direct interventions by the EC. For example, in 1995-6 the Commission blocked the injection of funds into an ex-*Efim* firm, BFM (*Breda Fucine Meridionali*), and the firm had to repay Lit.125bn of aids collected since 1985. The *Efim* case was archived by the European Commission as late as 1996 when it was agreed that the Italian government would absorb the firms' debt for Lit.8,500bn.

In 1994, the European Commission opened an investigation on the state aids given to *Enichem* in 1992 and 1993 and did not approve the package. This was the direct consequence of an agreement signed in 1991 by the European Commissioner for Competition Policy, Van Miert, and the Treasury Secretary, Andreatta committing the government to restructure and privatize a number of IRI and ENI firms to reduce their indebtedness to 'physiological' levels.[28] And in October 1996 the European Commission investigated state aids to IRI planned in the Italian budget for the restructuring of *Alitalia*, the national airline.

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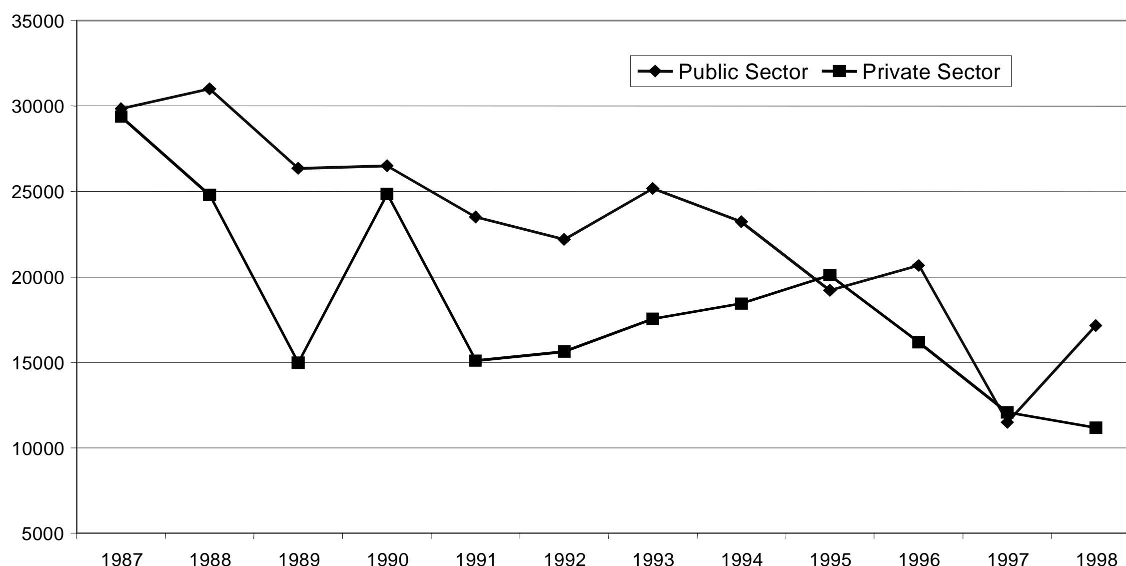
[26] Despite the underlying determination, there seems to be some ambivalence in the treatment of public enterprises, perhaps reflecting the different attitudes towards state ownership among Member States.

[27] ILVA, the steel sector leader set up in 1987, was further restructured and finally sold in March 1995, as it has often happened in Italian privatization, to an Italian private competitor, RIVA.

[28] *EC Competition Policy Newsletter* Vol.1 (Spring) 1994.

Figure 4
State aid to enterprises 1987-98 (billions lire at 1987 prices)



Source: Senato della Repubblica, 2000.

Note: Public sector includes aid to public utilities, and horizontal and sectoral interventions; private sector includes horizontal and sectoral interventions.

In 1997 the restructuring was not approved on the basis of a report by a private consulting firm (Ernst & Young). Negotiations led to a number of strict constraints on the running of the company, e.g. limits on investment, prohibition of fleet increases, freeze on fares. We now turn to the resources available to Italian public firms. The application of EU regulation on state aids and the direct involvement of the European Commission in the running of these enterprises, led not only to more controlled, but also to much reduced financial flows. Unfortunately, no ready-made, aggregate data is available on these flows. We show the decline using a number of sources. We start from the EU data from the Surveys on state aids. Table 2, which reports the EU data for all Italian firms, shows a first indication of the sharp decline of state aid in the 1980s. It reports that total aid to Italian firms as a percentage of GDP went from 5.7 percent in 1981-6 to 3.1 percent in 1986-8.

However, they do not report separate data for state enterprises. The Italian government made available its official surveys on state aid only in the 1990s, reporting data from 1987.[29] Research on public transfer or state aid was impaired exactly by the lack of detailed information and consistent time series. Figure 4 shows separate figures for state aid to Italian private and state firms between 1987 and 1998. Although for both private and public sectors it is evident an overall decline, the one for public firms was much more consistently so over the entire period than for private firms. However, these data include both horizontal and sectoral interventions and also all aid to public utilities (including railways and public transport).[30]

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[29] See Senato della Repubblica (1990); Senato della Repubblica (2000).

[30] Aid to manufacturing is classified into three categories: horizontal aid (e.g. R&D, environment, SME), aid to particular sectors (e.g. shipbuilding, steel), regional aid.

Table 2
State aids to Italian firms (total aid as a % of GDP)

Years	%
1981-6	5.7%
1986-8	3.1%
1988-90	2.9%
1990-2	2.4%
1992-4	2.2%
1994-6	2.0%

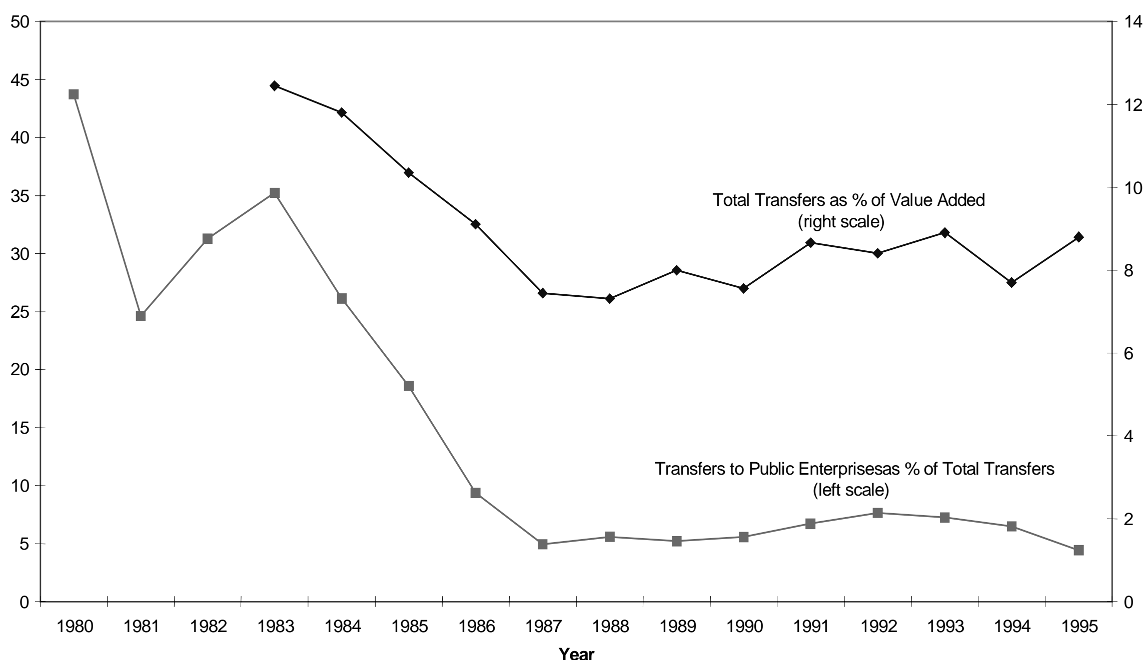
Sources: *First, Second, Third, Fifth and Sixth, Survey On State Aid In The European Union* (various years).

As discussed in section 4.2, Figure 1 reports the endowment funds granted to IRI and ENI from the 1950s to the 1990s. It shows that until the late 1950s these transfers were rather small, in the 1960s they increased and in the 1970s, the soft budget constraint period, they boomed. The boom continued until the mid 1980s and was followed by a sharp decline between 1984 and 1990. In order to provide a better picture of the overall funding provided by the state to public firms, funding that makes up their overall budget constraint, we constructed a time series of the amount of transfers to the industrial sector (Figure 5). This was done by merging data from a number of sources: Brosio and Silvestri, 1983, Artoni and Ravazzi, 1986, CER-IRS annual Reports, 1989, 1992, 1993, 1997. Total transfers to the industrial sector as a percentage of the value added of industrial transformation decreased from 12.45 percent to 7.45 percent over the period 1983-7 and remained fairly stable in the following years. As for the trend of state transfers to state firms, the data in Figure 5 offer a comprehensive picture because the data for public firms include both the endowment funds of public holdings and also the transfers due to the amortization of international bonds and loans from EIB and others financial institutions that are ultimately guaranteed by the government. In 1980, transfers to state enterprises accounted for 43.7 percent of total public transfers to the industrial sector. Seven years later, in 1987, this percentage was as low as 4.9, and averaged 6.1 percent in the following eight years up to 1995.[31] Not only total public transfers were declining as a percentage of GDP, but the share to state enterprises within public transfers was decreasing more than proportionally.

In conclusion, what emerges from all these figures is that public transfers were rapidly declining over the period from 1980 to 1987. This would have been unlikely to happen without European pressure, given the inability of the government, driven by party-political and vote-seeking objectives, to put forward credible commitments. Italian public enterprises in the late 1980s found their resources curtailed and their previously accommodating principal, the Italian government, frequently pressurised by the European Commission for its concessions. When in distress these firms could no longer count on its injections of funds. In addition, they found themselves in need to adjust to new single market regulations, for example changes in public procurement rules. Greatly reduced endowment funds, much reduced certainty of politicians' rescue interventions, need to abide to European competition policy rules, all contributed to create an environment that fits the characteristics of a hard budget constraint regime.

[31] Over the years, within those tranfers, the share of transfers to Southern Italy, to Cassa Integrazione Guadagni (compensation for temporary unemployment) and aids to export were growing in importance.

Figure 5
Public transfers to the industrial sector and transfers to public enterprises



Sources: Artoni and Ravazzi (1986) and CER-IRS Reports (1989, 1992, 1993, 1997).

Beyond the hard budget constraint and into privatizations

And then it came a point where the devolution of competition policy and the total devolution of monetary policy required by the European Monetary Union, forced the Italian government to give up entirely the policy tool provided by state ownership itself.[32] As Kumar (1993) points out, 'the recent dramatic change in the government's basic position and its intentions to privatize the surviving holding groups themselves, have clearly been selected as result of budgetary, rather than efficiency or ideology, requirements'.

The 1989 Delors Report put the European Monetary Union clearly on the agenda of the Italian government. But the 1991 Maastricht Treaty required, for entry in the EMU in 1999, a deficit to GDP ratio of less than 3 percent when the Italian one in that year was 10.2 percent and a debt to GDP ratio of less than 60 percent when the Italian one was 100.6 percent (Figure 3).[33] It became clear that even more drastic fiscal measures had to be taken to achieve these within the required time frame. The exceptional catching up took off after the 1992 speculative attack on the lira, which forced Italy out of the EMS. The fiscal adjustment between 1992 and 1997 was 'spectacular' (Padoa Schioppa Kostoris Kostoris, 1998) and it included a major privatization programme. Monetary and fiscal policies became most restrictive. These policies turned the primary deficit into a surplus and reduced the government total deficit and inflation to levels compatible with participation in

32 Political factors, not dealt with in this paper, also contributed. For example, the (legitimate) exasperation of taxpayers with the squandering of public monies for party-political purposes, also contributed to a 'bias' in favour of privatization.

33 Bank of Italy, *Annual Report 2000*.

the European Monetary Union (see Table 1). In May 1998 it was announced that Italy could join EMU from the start, in January 1999.

A radical privatization programme, not only in the manufacturing sector but also in the banking sector, was started by a number of new laws preparing the way. The Amato Law (No.218/1990) provided the structure for the privatization of the banking system and the Antitrust Law in 1990 challenged the behaviour of some large public enterprises.[34] Other laws soon followed to modernise economic and financial institutions. In 1993 the Banking Law (No.385, Testo Unico Bancario) brought together all the recent legislation on the liberalization of financial markets.

More specifically, the privatization process for state holdings was started by two important laws. In 1992, the Law No.35 turned major state-controlled holdings into joint stock companies. This had three important effects: to force the government to draw up a 'reorganization plan', to redefine the economic role of state-owned industries and to stop the granting of endowment funds (Cafferata, 1995; Padoa Schioppa Kostoris, 1998). In 1993 another law abolished the Ministry for State Holding (*Partecipazioni Statali*) and transferred the ownership of state holdings to the Treasury. This was the clearest signal that they were soon to be privatized and that the Treasury was ready to cash in. And it was exactly in this period that the system of top management appointments for state holdings was returned, from a party-driven system, to the government (Amato, 1994).[35] And the EU microeconomic pressure continued. As these legislative changes came about the European Court of Justice played a role as referee in the allocation of state aid by national governments. With the judgement of 29 July 1993 the Italian government was forced to agree an *acceleration* of its privatization programme (Cafferata, 1995). Finally, and most importantly, in July 1993, as a consequence of the agreement Andreatta-Van Miert (see above), the Italian government made plans to restructure and privatize a number of IRI and ENI firms to reduce their indebtedness to 'physiological' levels. The privatization programme went ahead between 1993 and 1997. The acceleration in its implementation is shown by the revenue pattern. Between 1986 and 1995 total revenue from privatizations was approximately Lit.50 trillion and this is approximately the same amount raised in the following *two* years (Padoa Schioppa Kostoris, 1998).

In conclusion, in the 1990s the supranational pressure took a new dimension when a change of ownership became the *de facto* new requirement for EU and EMU participation.

5.2 Effects of the switch of budget regimes: empirical evidence

In what way did the switch of budget regime change the behaviour of Italian public enterprises? Is there any empirical evidence on the *effects* of the hardening of the budget constraint on their performance in those years? Two other studies in our research programme and a number of other works have concentrated on the restructuring process that followed from this change of environment.

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[34] The Antitrust law is significant with respect to encouraging changes in the behaviour of public enterprises since, for example, in 1989 IRI had a 72% market share in telecommunications, and a monopoly by 1991 and in 1995, through *Alitalia*, 85% of domestic flights market share.

[35] In 1997 legislation to reform the tax system was introduced (D.L. 358/97) and in 1998 the new Company Law (58/1998), including new elements to improve investors' protection, was issued.

Bertero and Rondi (2000, 2001) studies the effect of the hardening of the budget constraint on the behaviour of a panel of Italian state-owned manufacturing firms over the period 1977-93 by carrying out a natural experiment which exploits the shift of budget regimes in the late 1980s. Drawing from the theoretical framework developed in financial economics for private firms, in Bertero and Rondi (2000) we test for the effect of financial discipline provided by debt across the two regimes. The empirical methodology consists in the estimation of two equations, one for total factor productivity and one for employment, to investigate whether financial pressure leads state-owned firms to improve efficiency and to reduce employment. The addition of the employment variable is crucial in our setting. Whereas the objective function of private firms has one maximand, profitability, the objective function that public firms are required to maximize has multiple variables. And in most cases employment is certainly more important than profit. We thus investigate if both a change in the leverage of public firms and the level of their stock of debt have an impact on productivity growth and employment growth. Our results reveal a sharp contrast in the response of Italian public firms to the pressure of debt[36] between the two periods. We find that, when the budget regimes shifts from soft to hard, the financial pressure has a *positive* and significant effect on state firms' productivity and a *negative* and significant effect on state firms' employment. Under the hard budget constraint, public firms did respond to financial pressure by increasing total factor productivity and by reducing employment.

Bertero and Rondi (2001) extends the analysis of the effect of a shift in budget regimes to investment in fixed capital, another crucial maximand in the objective function of public enterprises. Drawing from the theory of capital market imperfections we apply the empirical framework for the analysis of investment-cash flow sensitivity to our panel of state-owned manufacturing firms during the period 1977-93. In particular we parallel state firms to Anglo-Saxon public corporations which, under separation of ownership and control, are afflicted by agency problems, managerial discretion, misallocation of free cash-flow and over-investment (Jensen, 1986). We argue that, under soft budget constraint, abuse of managerial discretion and collusion between managers and vote-seeking politicians lead to wasteful investment (or over-investment) and that this could be detected econometrically via an excess sensitivity of investment to cash flow. We therefore investigate the impact of the shift from soft to hard budget regimes on the abuse of managerial discretion with respect to public firms' investment decisions by investigating the change in the sign and the magnitude of the coefficient on the cash flow in an investment equation across the two regimes. Consistently with our predictions, we find that the correlation between cash flow and investment is strong and positive under soft budget constraint and that this relationship disappears when the financial budget regime becomes more binding. The shift from a soft to a hard budget regime brings about an important change in the investment decision of public enterprises, with managers losing the discretion necessary to indulge in collusion with politicians, empire building and wasteful investment.

[36] Interestingly, our robustness analysis showed that the responsiveness of public firms across regimes was sensitive to the inclusion of trade debt. Kornai (2001) explicitly mention trade credit amongst the instruments that are used to soften the budget constraint. Apparently then, 'the proportion of involuntary trade credit' (Kornai, 2001, p. 1580) was severely reduced during the hard regime and acted as an additional disciplining tools for Italian state enterprises.

Lo Passo and Macchiati (1998) use a case-study approach to examine the restructuring process of the state holdings IRI and ENI from the late 1980s to late 1990s. As the main factors that effectively enhanced the restructuring process, they mention the reduction of public transfers and the enforcing of a harder budget constraint, the increased monitoring by the government, and the liberalization of many industries in which many public enterprises operate. Their punctual analysis highlights that both IRI and ENI responded to a change in the policy regime by modifying the group structure, refocussing their range of activities around the core business, replacing managers in operating companies, and improving profitability. They also stress the role of product market competition for a successful restructuring as they found that ENI, with more companies exposed to domestic and international competition, achieved better results and more promptly responded to the changed external environment.

Two other papers using firm level data provide indirect evidence of the effect of the hardening of budget regime on state firms. Interestingly, however, neither of these papers was meant to be a study of the restructuring of public firms. On the contrary their objective was to contribute to the debate on the impact of ownership changes on firms' financial and operating performance. They investigate the effects of privatization. Using a panel of ten former state enterprises operating in public utilities sectors over the period 1983-99, Fraquelli (2002) compares the performance of these firms before and after privatization. Based upon total and partial productivity indicators as well as profitability indices, a significant improvement of efficiency and profitability was found in the last years *before* privatization. The author interprets the empirical findings as resulting from reduction of political interference as well as from increase in the *perceived* risk of replacement for managers in view of privatization. Benfratello (2001) obtains similar results by investigating the profitability and financial performance of 15 former public manufacturing firms before and after privatization, over the period 1989-97. The main findings of the paper are: i) before privatization, public firms' profitability was only slightly (and not significantly) lower than that of a control sample of private firms; ii) improvement in the privatized firms' performance occurred mainly before (and only slightly after) privatization.

In conclusion, all these papers show evidence of the ability of public enterprises—both in manufacturing and in public utilities—to restructure when faced with a tighter financial discipline. Even the papers that were meant to study the effects of privatizations, end up concluding that much of the improvement occurred *before* firms were actually privatized, when a tighter discipline was imposed. Although empirical evidence of restructuring in the run-up to privatization is not rare in the literature, one feature differentiates Italy from the other industrialized countries where this occurred.[37] As discussed, the privatization programme in Italy did not start because of major political change, as it is often the case (e.g. as in the UK). It was instead spurred by EU pressure. Given the purpose of this paper, the relevant implication is that, in so far as the privatization of many state firms in the late 1980s and early 1990s was not anticipated, their responsiveness to the hardening of the budget constraint is more meaningful and significant of the impact of the supranational mechanisms that enforced the new discipline.

[37] See, for example, for the United Kingdom, Parker and Martin, 1995; for Spain, Villalonga, 2000, and for a cross-country sample Dewenter and Malatesta, 2001. In contrast, for Mexico, Lopez-de-Silanes (1997) found that government's efforts to restructure firms preprivatization often destroy value.

6. Extension of the case study and implications for the SBC theory

The case study methodology requires, at this point, deducting from the specific example of the EU and Italian firms the lessons for a more general context. We examine two questions. First: to what other context may this mechanism be extended to? Second: why might supranational pressure work where simple domestic economic or institutional reforms are ineffective?

First, our mechanism for hardening the budget constraint works in a number of contexts besides the Italian/European Union one: not only in market economies like Italy, but in transition and emerging ones; not only for members of the EU, but for applicants too; not only through European Union's policies but also through the policies of other international organizations (e.g. IMF, the World Bank, the World Trade Organization, NAFTA, GATT, EEA, EBRD); not only for state firms, but for private firms as well (although, this is beyond the scope of this paper).

All transition economies, even just 'aspiring' to membership of the EU—for example Poland, Hungary, the Czech Republic, Estonia, Slovenia, Cyprus, Bulgaria, Romania, Latvia, Lithuania, Slovakia, Malta and Turkey—have started to align their policies, law and regulations to those of the EU. On the macroeconomic side, these preaccession countries have to reduce inflation, liberalize capital markets, keep fiscal policy under control, participate in ERM II and meet the Maastricht criteria,[38] as analysed in, for example, Kolher and Wes (1999). On the microeconomic side, firms have to comply with EU rules and directives. For example, Carlin et al., (1999) study and compare, using a survey technique, the progress in awareness and compliance to EU directives made by Polish and Romanian manufacturing firms.

On both accounts the experience of Italian public enterprises with the EU is a most valuable preview of the financial pressure and consequent hardening of the budget constraint that will be exercised on the public firms of these EU preaccession countries.[39] And the recent fate of the Belgian national carrier Sabena, to which any form of state aids, direct or indirect, was blocked by the European Commission and bankruptcy followed, shows that the EU competition policy, if anything, has become even tougher.[40]

Besides the EU, other international organization initiate the supranational mechanism we discuss and harden the budget constraint of public enterprises. The EU rules on state aids regulation, established progressively from scratch in the EU, have now been transposed, for example, to the European Economic Area and EFTA and have inspired the GATT-WTO subsidy codes. More generally, the mechanism works through the rules and conditions supranational organizations are able to impose on national governments. For example, most IMF conditionality packages include strict fiscal tightening and many World Bank programmes include structural reforms. EBRD interventions with banks require them to deal with their bad loans and this often is immediately translated in a

[38] The EU is not allowing opting out of EMU to new members.

[39] Other studies have examined other disciplinary effects of the policies of the European Union. For example, the constraints imposed on transition economies by the requirements for accession to the EU can improve law enforcement (see Roland and Verdier, 2000).

[40] See *The Financial Times*, 5 November 2001.

harder budget constraint for firms. Even more generally, the increasing global economic integration and interdependence works itself as a supranational 'institution'. The global nature of capital flows mean that containing inflation and government deficit is a prerequisite to obtaining new foreign capital for emerging and transition economies. Dollarization and currency boards are exchange rate mechanisms that create similar pressures. And the global and interdependent nature of capital and product markets together with the liberalization of trade, create a global competitive pressure which leads to hardening budget constraints of public enterprises.[41]

Our second question is: why does supranational pressure work as a mechanism to harden the budget constraint of public enterprises whereas domestic policies are ineffective? In a few words, because supranational institutions eliminate the time inconsistency problem at the domestic level. Domestic reforms can be reversed ex post by a political overturn, by local political and economic new priorities or even by the fear of significant public opposition (especially in countries with coalition governments) when monetary and fiscal restrictions impose 'sacrifices' on voters. Whereas supranational institutions, which maximize the welfare of a supranational constituency, are able to impose fixed policy rules which prevent national governments form reneging previous commitments for vote-seeking or other reasons.

However, this leaves open the question: why are governments willing to give up sovereignty to supranational institutions in the first place? Participating in international organization which will 'force' their policies on national governments creates a substantial cost: the loss of independence to pursue policies out of line with the objective of a supranational welfare function. These costs can be high. For example, this function may maximize competition at a regional level, as in the EU case, at the expense of domestic employment. In some cases, they are considered higher than the benefits, as the UK decision to stay out of EMU shows. In some cases, what the supranational welfare functions maximizes is debatable, as the discussions on the appropriateness of IMF packages during the 1997 Asian crisis show (see for example Stiglitz, 2000). So, what are the incentives to participate?

In exchange for devolving policies and putting up with supranational constraints and pressures domestic governments get the benefits of membership of certain supranational institutions and these depends on the nature and on the functions of the institution itself.[42] The usual benefits include increased trade flows, increased financial flows and access to loans. Institutions such as NAFTA, EFTA, GATT and WTO provide mainly the first, the IMF and the World Bank provide mainly the second. The EMU is the only one that provides both.[43] And even *before* entering a supranational organization, the prospect of incurring the costs of non-accession can be a powerful incentive. For example, linking the

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[41] For example, Bartel and Harrison (1999) show that public sector enterprises that have been shielded from import competition are inferior performers.

[42] For example, EMU supporters argue that the common currency will eliminate exchange rate risk, reduces interest rates, stimulates investment and reduces employment.

[43] There are other respects in which the EU is unique. The EU's legislative power and related enforcement of regulations and laws through the European Court of Justice are unmatched by any other supranational organization. Moreover, its political institutions, built up over more than four decades, are now more developed than those of any other region in the world.

success of economic reforms, including of the budget regime, to the prospect of access to the European Communities—as for many Central and Eastern European countries—or to the accession to the WTO—as for China—will create the same pressure the Italian government felt to fulfil the requirements for entering EMU.

The weaker the government, the greater is the need for mechanisms to prevent time inconsistency, or, the larger its deficit, the greater the incentive. The loss of independence with respect to some economic policies may be viewed in a different light, if the upward devolution provides the opportunity to shift budgetary difficulties and unpopular reforms to a supranational authority.[44]

Finally, regarding incentives, the more economies become interdependent, the more likely the supranational mechanism works. Even if some international agreements cannot be legally enforced, as they can within the EU, the threat of retaliatory action can be a powerful incentive in a global economy (Ehlermann, 1995; Kobia, 1996). More importantly, the costs of secession from an international organization are greater in a global economy. After a country has joined an international organization or trade agreement the political and economic costs of leaving are prohibitive. In parallel, after a country has accepted a much needed loan, there are high costs not to comply with the required policies.

7. Conclusions

Easy access to government funds and the consequent *soft* budget constraint of state-owned firms are considered among the main reasons for their lack of financial discipline and their well-documented inefficiencies (Shleifer and Vishny, 1994). Although the soft budget constraint syndrome can also affect private firms or private financial institutions, undoubtedly public enterprises are more prone to suffer from it. Governments' time inconsistency and the management's moral hazard, possibly leading to collusion with politicians, are among the causes.

Privatization per se cannot be considered the necessary and sufficient condition to improve these companies' performance. In fact, privatization did not produce the expected results in some countries, for example Russia, Ukraine, Romania, and in the Czech Republic (Kornai, 2001). And there is evidence, on the other hand, that economic reforms that include tightening budget constraints as well as liberalization, the increased use of

[44] In Italy, where the budgetary adjustment to meet the Maastricht criteria was impressive, the strong popular support to entry the EMU at some point seemed to falter. Many politicians and representatives of the entrepreneurs' Confederation questioned the benefits of, and at some point fiercely opposed, EMU participation (see, for example, in the Italian press: 'Euro' (L. Paolazzi, 1997, *Il Sole 24ore*, Milano), 'Euro Sì: Morire per Maastricht (Yes to the Euro: to die for Maastricht)' (E. Letta, 1997, *Laterza*, Bari) and 'Euro No: Non Morire per Maastricht. (No to the Euro: Not to die for Maastricht)' (L. Caracciolo, 1997, *Laterza*, Bari). However, the firm stance of the government, fully aware of the costs and benefits of the upward devolution of the monetary policy to the European Central Bank, prevented a reversal (Ciampi, 1996). A counter example, on the other hand, is the Japanese economy which, perhaps, has not been subject to strong supranational mechanisms or strong external discipline. *The Economist* (2001, No.8245) reports the sizeable number of low performing and mismanaged 'special corporations' still owned and subsidised by the government, and on how they have resisted attempts of reform, discipline or privatization threats throughout many changes of the guard.

incentives or creative governance have proven effective in a number of cases (see Megginson and Netter, 2001). Pinto et al., (1993) show that the Polish state sector responded to the 'big bang' reforms of January 1990 and document significant improvements of manufacturing firms. The reform included tightening in fiscal and monetary policies, tighter bank lending behaviour and 'no bailout signal'. Majumdar (1996) finds that the difference between the performance of private and public firms became much smaller when the Indian government introduced (in the late 1980s) a number of reforms that included the implementation of private-sector management practices and performance parameters which the enterprises were to attain on a year-to-year basis. Sun (2001) shows that China's joint-stock co-operatives, in which local governments are involved, are adaptively efficient. Li (1997), for a sample of 272 Chinese state-owned firms over the period 1980-9, finds that economic reforms based on improved incentives and compensation led to marked improvements in the marginal and total factor productivity. In other words, the problem of enforcing and maintaining a hard budget constraint is still an open challenge, to some extent, independently of privatization programmes already in place. Kornai remarks: '…it emerged that the 'holy trinity' of stabilization, liberalization and privatization were not sufficient after all. Hardening the budget constraint is a task of equal rank with them, as experience in Russia has shown' (2001:1591).

This paper identifies a mechanism that hardens the budget constraint of public enterprises. Adapting the federalist approach modelled by Qian and Roland (1998), it shows that the 'upward devolution' of economic policies to a supranational institution is an effective way to mitigate the time inconsistency problem of national governments and, consequently, to constraint the budget of public enterprises.

Our methodology consists of a case study in which the supranational institution is the European Union and the public enterprises are Italian. The mechanism worked in the late 1980s through the devolution of macroeconomic policies, linked to the European Monetary System and Monetary Union, and of microeconomic policies, linked to competition policies and the Single European Act. These forced a reduction of the government deficit and of state aids and included direct interventions of European institutions in the running of Italian public enterprises. We show that greatly reduced funds and greatly reduced certainty of politicians' rescue interventions combined with the need to satisfy European competition rules, severely tightened the budget regime for Italian state-owned firms in the late 1980s.

The mechanism has applications beyond our case study. We discuss how the mechanism identified for the European Union works for many other international organizations. IMF conditional loans, World Bank structural programmes, EBRD financial help, WTO negotiations, arrangements within NAFTA, are all examples of supranational programmes that constrain domestic policies, which, in turn, directly or indirectly, tighten the belt of public enterprises. And the more integrated/global the world economy becomes, the more necessary will become the devolution of policies upwards, and the more likely that public enterprises will have to face tighter budget constraints.

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