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## **The Fiscal Roots of Delayed Financial Liberalization in Western Europe, 1960-1991**

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### **Abstract**

Capital controls survived in a number of European financial systems until the late 1980s, whereas other countries espoused a much more liberal approach. Why were financial reforms so controversial and controls so hard to dismantle? In the paper the determinants of delayed liberalization are empirically investigated for a panel of 16 European countries from 1960 to 1991. We find evidence in favour of a public finance interpretation of different attitudes towards financial liberalization.

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## **Introduction**

Foreign exchange and capital controls were a critical facet of the interwar “great reversals”, which led governments of industrialized countries into a policy of systematic and pervasive regulation of banking and financial system (Rajan and Zingales 2003). In postwar Western Europe, the inheritance of interwar regulation proved hard to overcome, as governments, markets and international institutions struggled over the scope, the speed and the sequencing of financial reforms. The attitude towards liberalization varied substantially across Europe. In some countries, controls survived until the late 1980s and liberalization was reluctantly embraced only under strong political pressure from the EEC’s single market project (Bakker 1996). Why did European countries differ so much as to their attitude towards financial reform? Why was liberalization so controversial and controls so hard to dismantle? In order to address such questions and advance tentative answers, the paper examines the theoretical rationale for capital controls (section 1), outlines the postwar experience of Western European countries (section 2) and uses an index of financial openness as dependent variable in order empirically to explore its economic, institutional and political determinants for a sample of 16 European countries in the period 1960-1991 (section 3). The results (presented in section 4) suggests that, after controlling for a wide set of variables, different attitudes towards financial liberalization can be explained by differences in the fiscal structures of European countries.

### **1. Why do governments regulate international finance?**

As suggested recently by Wyplosz (1999 and 2001), capital controls can be regarded as a policy instrument aimed at reconciling strong preferences of European governments for pegged exchange rates (from Bretton Woods to the EMS) with a degree of independence in the use of domestically-gearred monetary policy. According to this view, controls were (up to the mid-1980s) a European solution to the ‘trilemma’, for they allowed policymakers to manage exchange rate targets, minimise disruptive effects of capital mobility on the real economy, and limit financial market instability. This view is consistent with usual macroeconomic explanations that argue that governments resort to financial regulation in order to insulate their economy from external shocks such as changes in international interest rates or speculative attacks against their currency. Such

motive, however, seems at odds with the doubtful effectiveness of such controls. It is uncontroversial that governments of industrialized countries, by engineering external controls, temporarily succeeded in inhibiting international arbitrage, thus driving sometimes substantial wedges (though diminishing over time) between domestic and international interest rates (Marston 1997). However, some argue that the effects of capital controls on financial quantities of macroeconomic importance are practically not measurable (Shafer 1997: 137). Others emphasize that existing data give little support to the view that control programs significantly affected fundamental macroeconomic variables, such as the volume and composition of capital flows, changes in international reserves, or the level of the exchange rate (Dooley 1995: 3-4). Similarly, there exists considerable evidence against their alleged ability to prevent speculative attacks on fixed exchange rates. In the same fashion, some argue that there exists consistent historical evidence that capital controls (especially on outflows) have been largely ineffective, exposed to corruption and of little help to economic adjustment (Edwards 1999). The consensus view is that, in the short-run, controls may allow governments to 'buy time', i.e. to maintain inconsistent macroeconomic policy while temporarily skipping costly adjustment. However, it is highly questionable 'whether or not these yield differentials are large enough and last long enough to enhance the effectiveness of a policy regime in attaining the government's economic objectives' (Dooley 1995: 29-30).

In fact, capital controls should be considered not 'per se', but as part of an overall controlled financial regime embracing both domestic and external transactions. A growing literature (surveyed by Dooley 1995, Johnston and Tamirisa 1998, Schulze 2000) illustrates the long-run fiscal implications of capital controls as part of a wider policy of financial repression. In this perspective, controls (especially on capital outflows) are fundamentally designed to prevent the erosion of the domestic tax base, thus easing the government's intertemporal budget constraint. This public finance literature focuses on three different, though correlated aspects: capital taxation, seigniorage, and financial repression, whose relative importance depends on the government's preference over the distribution of the tax burden (which reflects political factors) and the costs of alternative forms of taxation (which reflect structural-institutional factors). By constraining secular capital outflows, capital controls may prevent a deterioration of the tax base and enhance government's ability to tax capital effectively (Schulze 2001: 35-36). With few alternative opportunities of investment

available in the form of foreign assets, individuals and companies are forced to hold all their savings in the form of domestic financial assets, which can be taxed far more easily than foreign ones. Constraining the exit option may prove especially necessary in countries where domestic distortions (in the form of political risk or poorly defined property rights, among others) provide domestic investors with a strong incentive to prefer foreign investments, thus leading to underinvestment in domestic capital (Dooley 1995: 18-20). Using a specific public finance approach, Giovannini (1991) argued that, from an individual country's perspective, distortionary capital controls (in the form of a tax on foreign assets) can represent a second-best welfare-improving solution in the presence of potentially high welfare costs of international capital outflows to evade rising domestic taxes (e.g., due to rising government debt). Alternatively, capital controls may be the outcome of a distributional conflict. Alesina and Tabellini (1989) provided a model in which governments, supported by opposed constituencies (workers and capitalists) and with opposed distributional objectives, alternate in power. Polarization and political instability tends to translate into uncertainty about future fiscal policies. As capitalists have incentives to accumulate foreign assets to avoid the risk of future taxation (i.e., the political risk of a hostile government), a workers' government will always find it optimal to impose capital controls.

The literature emphasises that capital controls are vital also for governments which resort to inflationary finance (i.e., monetisation of deficit via borrowing from central bank) in order to raise a high share of their revenues from the process of creating fiat money. As free capital mobility under conditions of rising inflation usually causes substantial currency substitution (Fisher 1982; Giovannini and Turtelboom 1994), capital controls may prove a second-best instrument which contributes to limit the erosion of the base for the inflation tax. This may result particularly appealing for governments forced to rely heavily on seigniorage because of substantial tax evasion due to large underground economies (Nicolini 1998). More generally, as an inward shift in the money demand function can be considered the most likely effect of liberalization, as savers substitute away from domestic towards foreign currency deposits, Giovannini (1989: 185-188) suggested that, thanks to capital controls, a government may need a lower inflation rate to generate a given tax revenue. Consequently there may exist a trade-off between restrictions on capital flows and a heavier use of inflationary finance.

A critical point that emerges from the literature is the role of financial intermediaries, namely commercial banks (Romer 1985). Although models of

seigniorage usually take only currency held by the public into account, Brock (1984 and 1989) pointed to the fact that in a large number of countries the tax is also levied on borrowers and lenders through high reserve requirements (or liquid asset ratios) imposed on the banking system—i.e., forced holdings of non- or low-interest bearing assets, which artificially raise the demand for money, thus expanding the inflation tax base. This clarifies the fiscal relevance of capital controls on international banking transactions. If residents could use off-shore financial intermediaries with no restrictions, the tax base represented by bank reserves would result significantly eroded. Thus, as Drazen (1989: 14-15) emphasised, liberalization of capital transaction would largely remove seigniorage as a source of revenue not only through lower inflation (the tax rate) but also through reduced tax base. Convergence towards the less restrictive banking regulation would in fact be necessary in order to guarantee the competitiveness of domestic banks, thus leading to a fall in reserve holdings. Capital controls may allow a government to offset the loss of seigniorage due to a reduction in the tax rate by increasing reserve requirements (the largest part of the seigniorage tax base). As a consequence, capital controls represent a vital policy instrument for governments living in a high-seigniorage regime. Although literature largely focuses on controls on capital outflows, Brock (1984) argued that there also exists a public finance rationale for controls on capital inflows after capital account liberalization. Namely, reserve requirements on capital inflows may provide additional revenue that can more than offset the loss stemming from opening the capital account. The hypothesis is consistent with the observed path of development in Latin American countries in the 1990s. Here capital controls on capital inflows, implemented as temporary devices in the face of post-liberalization external shocks, have generally outlived the crisis and turned into permanent features of the incentive structure of the economy (Reinhart and Smith 2001).

Capital controls are usually part of a broader package of “financial repression” including a wide set of regulations, either domestic (such as credit ceilings, regulation of domestic interest rates, compulsory credit allocation, high reserve requirements and liquid asset ratios, portfolio constraints) and external (such as prohibition of, quantitative controls on and tax discrimination against residents’ holdings of foreign financial assets (Roubini and Sala-i-Martin 1999: 279). While governments usually present financial repression as a growth-enhancing policy, its fiscal implications—i.e. reduced costs of domestic borrowing by the public sector—are particularly appealing. In fact, financial repression represents a ‘tax-like’ method of financing government deficits.

Giovannini and De Melo (1993) regarded financial repression as a policy based on a combination of restrictions (price and/or quantity) imposed on domestic financial sector and controls on international capital flows (in order to avoid circumvention of restrictions through off-shore intermediaries), that translates into an artificially low cost of domestic funding and provides an additional source of revenue for the government. Revenue from financial repression is particularly appealing to governments that face uneven effective income-tax rates (because of systemic corruption or large variations in the government's ability to verify income across social groups). By forcing captive buyers to hold government debt at interest rates below market yields, interest costs are cut off and the government's recorded deficit reduced. The largest captive buyers are usually commercial banks, on which governments can impose high reserve requirements (in fact a way of borrowing indirectly from the banking system at zero or near-zero cost: Fry 1997: 69-76) or portfolio constraints (i.e. high liquid asset ratios coupled with regulations which make government securities the only asset eligible for meeting the requirements). Obviously, financial repression can be effectively implemented only in a regime of financial protectionism with limited possibilities for investors and intermediaries to enter external transactions. This is why capital controls can be considered a method of financial repression with relevant fiscal implications. Aizenman and Guidotti (1994) argued that, in the presence of high tax collection costs (as in the case of developing countries), capital controls may represent a welfare-enhancing second-best instrument. By introducing a wedge between the international and the domestic real interest rate, they reduce the domestic equilibrium interest rate at which the government refinances its domestic debt (i.e., a form of seigniorage on government liabilities), thus reducing the amount of revenue to collect from taxes. One can also expect that the utility assigned to revenue from financial repression increases with the size of the public debt. Following Alesina and Tabellini (1989), this preference is likely to be exacerbated by political instability, when the current government does not fully internalize the future costs of debt servicing and deliberately resort to overborrowing.

We can conclude, with Dooley (1995: 36), that '...these recent results suggest that fiscal considerations are the most important determinants of the use of capital controls and that the controls, or some other factor highly correlated with the use of controls, have measurable effects on government revenues'. In fact, Alesina et al (1994) found for a sample of 20 OECD countries in the period 1950-1989 that evidence for

capital controls was consistent with an inflation tax explanation. Specifically, capital controls reduce the possibility of portfolio diversification into foreign currency assets, thus limiting the ability of individuals to avoid the inflation tax and facilitating the imposition of administrative regulation designed to keep domestic interest rates artificially low. For a different sample of 19 industrialized and 42 developing countries in the period 1966-1989, Grilli and Milesi Ferretti (1995) provided evidence that capital controls are closely associated with higher inflation, higher reliance on seigniorage as a share of total revenues, and lower real interest rates.

## **2. The postwar experience of Western Europe with capital controls**

The historical experience of Western European countries after 1960 confirms that capital controls were usually part of broader packages of financial regulation. In fact Wyplosz (2001) emphasises that all countries that repressed the domestic financial system implemented some kinds of exchange and capital controls, although the opposite is not true. In almost all countries (with the exception of West Germany), a “negative” system of administrative controls was maintained, which forbade all cross-border capital flows that were not explicitly authorized. In order to control capital flows governments resorted also to dual exchange rates (discriminating between current account and capital account transactions), and to either implicit or explicit taxation. Voth (2003) provides evidence that such capital controls significantly increased the cost of equity finance in post-war Europe.

The European experience also suggests that controlled regimes of capital movements were not only generally ineffective, but also plagued by leaks and loopholes. The escalation of controls between 1970 and 1974 did not allow German authorities to stem the tide of speculation on the appreciation of the DM, nor to regain control over domestic monetary aggregates. Administrative or market-based limitations on external intermediation of commercial banks, widely used by Continental governments in the 1960s and 70s, could be easily circumvented by ‘externalizing’ banks’ location in unregulated entrepôt (such as London and Luxembourg) or off-shore centres. Monetary authorities themselves generally expressed dissatisfaction for their distortionary and asymmetric effects. Why then were some European governments so reluctant to dismantle them? The paper contends that, as suggested by the public finance literature, the ultimate sources of delayed financial liberalization lie on fiscal grounds. According to this view, governments consistently used capital controls (/together with other

domestic measures of financial restrictions) in order to extract additional revenues from their economy, thus relaxing their budget constraint.

The European experience of regulation/deregulation of international finance can be summarized by the Quinn-Toyoda index, a measure of financial openness based on statutory regulation of international transactions (both current and capital account) reported by the FMI, and taking on values from 0 (minimum openness) to 14 (maximum openness) (Quinn 2003).

FIGURE 1 HERE

Figure 2 shows also the liberalization delay—that is, the difference between the degree of openness of each country and the average European openness. In fact, increasing financial openness represents a global trend throughout the second half of the 20<sup>th</sup> century, driven by the rise of international money and capital markets (in turn determined by technological innovations, real-sector developments and regulatory asymmetries) which eroded the ability of governments to stem the rising tide of global finance (Bryant 1987: 58-73). This liberalization gap, observed at five-year intervals, is presented in Figure 2: positive values mean that a country had a degree of openness above the period-specific average, whereas negative values denote below-average openness.

FIGURE 2 HERE

The great diversity of the historical records is striking. At the upper end, countries such as West Germany and Switzerland enjoyed virtually complete liberalization since the 1950s, with a few occasional reversals of attitude during the 1960s and 70s. At the bottom end, peripheral countries (such as Finland, Norway, Spain, Portugal and Greece) maintained heavily controlled systems and progressed toward liberalization very slowly. A peculiar, well-known case is of course Britain, a heavily controlled system at the beginnings which suddenly switched to complete liberalization at the end of the 1970s. How can we systematically account for such wide diversity?

There exist two possible, complementary explanations for delayed financial reforms in Southern countries. In the 1980s, a number of studies set in the public finance tradition suggested that Mediterranean countries showed striking analogies with

the experience of developing countries. In fact, Italy, Spain, Portugal and Greece relied heavily on seigniorage revenues to finance their expenditures in the late 1970s and early 1980s, allegedly because of poorly or insufficiently developed tax base for regular taxes. Such behaviour was in sharp contrast to their Northern continental counterparts, such as France, Belgium or Germany, for which revenues from seigniorage were almost negligible. In Southern high-seigniorage countries there existed also strong evidence of a structural nexus between inflationary finance and selected indicators of financial repression. Namely, higher ratios of seigniorage-to-GDP (or to tax revenues) were associated to higher ratios of budget deficit-to-GDP and to higher demand for reserves (as measured by reserve-to-total bank deposits ratios – a standard proxy for financial repression). (Fischer 1982; Brock 1984; Drazen 1989; Grilli 1989; Giovannini and de Melo 1993). These studies implicitly suggested that a public finance explanation – according to which financial repression is basically motivated by revenue concerns – might be appropriate for Southern countries. Additionally, commitment to European nominal convergence and integration—i.e. to reduce inflation differentials, implement financial reforms and liberalize capital markets – was bound to result in the removal of capital controls and other means of financial repression as a major source of revenue. Giavazzi (1989) and Bacchetta and Caminal (1992) suggest that governments relying significantly on implicit taxation and capital controls, anticipated the fiscal impact of financial liberalization and deregulation, (i.e. the vanishing of their ability to extract implicit revenues from their banking and financial system) and tried to maximize implicit revenues from financial repression (including capital controls) before liberalization, in order to reach 1992 with lower public debt and interest payments. This would also have helped them to meet fiscal criteria debated in the second half of the 1980s and finally incorporated into the Maastricht Treaty. A possible extension of the argument was suggested by Dornbusch and Reynoso (1989). Since financial liberalization may have a detrimental impact on regular fiscal revenues, it may require an increased use of debt after liberalization: again, governments had an incentive to maximize revenue from implicit taxation in the short-run.

### **3. Assessing the determinants of delayed liberalization**

We want empirically to test the hypothesis that fiscal patterns determined the attitude of governments toward financial liberalization. In order to do that, we use the Quinn-Toyoda index as dependent variable and regress it against a set of fiscal variables

identified as potential determinants of delayed financial liberalization according to the public finance literature reviewed in Section 1, while controlling for other economic, institutional and political factors. According to the public finance approach, governments with a relatively inefficient tax system, a narrower income tax base, a relatively underdeveloped domestic capital market and large budget deficit, have stronger incentives to resort to inflationary finance in order to allow the government to extract extra revenues from the banking system as well as to reduce the cost of financing its debt. This, in turn, requires a degree of repression of the banking and financial system necessarily complemented by restrictions on external financial transactions. To test such relation between fiscal structure, inflationary finance and capital controls, I experiment with a set of fiscal indicators as follows:

- the log of 1 plus the inflation rate (INF), as a proxy of the magnitude of implicit taxes raised by the government through seigniorage;
- the log of 1 + the ratio of tax revenues to GDP in each benchmark year (REV) and at the beginnings of the period (REVINIT), which measure the level of development of the regular tax system;<sup>1</sup>
- the ratio of government budget balance to GDP (BUDGET), which measures the size of the borrowing needs of the government (deficits are reported with a minus sign);
- the log of 1 + the ratio of claims of commercial banks on the central government to their claims on the private sector (GOVBANK), which measures the distortions created by the financing needs of the government in the credit allocation mechanism;
- the log of 1 plus the ratio of bonds issued by the government to the total securities annually issued on capital markets (GOVBOND), which captures the same phenomenon from a flow (not stock) perspective;

In addition, capital controls are a fundamental complement of domestic repression of financial intermediaries, as they can partially prevent agents (both individuals and banks) from using off-shore markets to by-pass or circumvent domestic regulation. In the same fashion controls limit investors' ability to diversify their portfolio towards foreign assets, thus leaving them less scope to avoid inflation tax on domestic money holding. Also, by isolating domestic intermediaries from competition, they may

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<sup>1</sup> I have calculated also the ratio of government's expenditure to GDP, which however is not used in the regressions due to its almost perfect correlation with the revenue variable (coefficient 0.95).

facilitate the imposition of high reserve requirements and other distortionary regulations (Drazen 1989; Alesina et al. 1994). As a consequence, we use the log of 1 plus the real effective reserve requirements (ERR), the ratio of bank reserves to total bank deposits, as an additional regressor. This measure is an amalgam, which only in part captures a monetary policy tool (the reserve requirement ratio). In fact, non-policy factors also affect the magnitude of the reserve ratio – in fact, the reserve ratio may capture some aspects of financial development (e.g., with underdeveloped financial systems, banks may hold reserve in excess to statutory requirements to meet basic liquidity needs or because alternatives are unsatisfactory or not available (Haslag and Koo 1999: 3-4). However, this is not necessarily a problem. Both statutory reserve requirements and involuntarily held excess reserves ('float' balances held by banks at the central bank) can be considered to be part of the financial repression package enforced by monetary authorities, and the 'effective' reserve requirement is an appropriate indicator of the actual fiscal revenues provided by financial repression (van Aarle and Budina 1997). If the public finance explanation is correct, we should observe that relative inefficiency of the tax system, higher budget deficit, public debt and inflation rates were systematically associated to below-average financial openness.

However, we also need to control for the impact of institutional factors on fiscal and other policy outcomes. In fact, under different institutional and political systems, similar budgetary constraints may well lead to very different regulation of the financial system (Alesina and Rosenthal 1995). By instance, institutional reforms that give the central bank significant independence of the government are assumed to reduce the leeway for the latter to resort to inflationary finance (Grilli et al, 1991). To test this assumption we use as additional explanatory variable the degree of economic and political independence of the central bank. The variable (BANK) is a summary index of different measures elaborated by a number of authors (Alesina, Grill et al., Cukierman, Eijffinger and Haan), and takes values from 1 to 3, where 1 means maximum independence and 3 maximum dependence.

We want to add a number of control variables. It is a matter of debate among political scientists whether financial liberalization is detrimental to social policy development. In fact, the consensus view emerged in the 1970s and 80s stressed that financial liberalization and increasing openness not only could not be reconciled with the traditional state interventionism in social security, but would also undermine the base of established welfare systems (Carroll 2000; Hicks and Swank 1992). If that's the

case, governments providing generous welfare schemes may have refrained from pushing ahead financial reforms. We test this proposition by using as regressor the ratio of social security transfer to GDP (SSTRAN) as a measure of the quality of social insurance provided by governments to their citizens. It also argued that the larger the trade openness of a country, the lower the scope for external financial restrictions. Therefore I use the ratio of imports to GDP as a proxy of trade exposure (TRADEEXP). I also include the log of GDP per capita (GDPPC) among the regressors, assuming that it captures factor endowment and industrial specialization. Relatively richer countries enjoying a comparative advantage in highly skilled labor and specialized in capital intensive sectors are more likely to favour financial openness (since skilled labor benefits from foreign capital competing for its services). Conversely, countries with relatively abundant semiskilled or unskilled labor and specialized in labor intensive sectors may fear that financial openness decreases wages and returns on domestic capital, thus opposing financial liberalization.

As further controls, we use two other institutional indicators, one capturing the constitutional design of European countries, the other one capturing its political economy. As to the former, it is interesting to test whether institutional systems in which the government enjoyed substantial discretion and was not constrained by strong checks and balances, either domestic or external, were less or more prone to resort to financial repression. For this reason, I use an index of institutional constraints of central government (CONSTR) elaborated by Schmidt (1996) and ranging from 0 (low constraints) to 5 (high constraints). The index includes EU membership, a federalist state structure, a strong bicameralism, frequent referenda, and central bank independence (thus partially overlapping with the BANK variable previously discussed).

Political economy can also play a role. Following the distinction advanced by Lijphart (1989 and 1999) between consensus—as opposed to majoritarian—democracy, political scientists categorize industrial democratic regimes according to their degree of “corporatism”. The latter can be defined restrictively as a system of interest representation, but is generally referred to more extensively as an institutionalized pattern of economic policy-making based on “the co-ordinated, co-operative, and systematic management of the national economy by the state, centralized unions, and employers...presumably to the relative benefit of all three actors” (Siaroff 1999: 177). The prototype of such political economy models are Austria and the Scandinavian countries, although Northern continental nations (such as the Netherlands and West

Germany) are generally assumed to have developed comparable systems of “liberal”—as opposed to “socialdemocratic”—corporatism. The lack of co-ordinated and co-operative management is usually referred to as “pluralism”, although a number of different categories are proposed in the literature to cope with specific characteristics of non-corporatist countries. In Europe, for example, France is sometimes referred to as a “statist” country, whereas Greece, Spain and Portugal are classified among the “syndicalist” nations (fragmented and decentralized economic interests, conflictual modes of interest intermediation, uneven regional development). Italy is assumed to share a number of features of both the statist and the syndicalist models (Quinn and Inclan 1997). As to the expected relation between a corporatist political economy and financial repression, we may well expect that a centralised and powerful government actively involved in the co-ordinated management of the economy and in the provision of large welfare services could in principle be more inclined to constrain international financial transactions in order consistently to integrate the financial system within the overall management of the economy. However, some of the corporatist nations—such as West Germany—traditionally adopted a liberal, market-oriented attitude, while some of the non-corporatist nations, especially in the Southern periphery, made use of large state-owned enterprise and bank sectors in order to support investments and smooth out the impact of economic fragmentation along both regional and societal lines. Moreover, it is well known that neo-corporatist regimes were better able to absorb the inflationary shocks of the 1970s. Unlike other studies which used multiple dummy variables to represent corporatist, liberal, statist and syndicalist political economies (Quinn and Inclan 1997: 781-783), here I prefer to resort to a simpler operationalization based on the degree of corporatism that can better account for changes over time and avoid problems of multicollinearity. The explanatory variable (CORP) is based on the Siaroff index of corporatism (Siaroff 1999), which ranks nations under a 1-5 score where 5 means high corporatism and 1 pluralism. Again, the period 1950-59 has been assigned the same value of 1960.

Finally, three further political indicators are used as control variables. It is a usual assumption in public finance empirical studies that governments dominated by left-wing parties can be more unemployment-averse and pro-high public spending than centre or right-wing governments. Thus, they can attempt to exploit the Phillips curve by creating inflation, to resort more systematically to seigniorage to ease their budget constraint and/or to impose financial restraints in order to implement redistributive

policies in favour of labour (Alesina and Tabellini 1989). In the same vein, left governments are more likely to incline to financial restrictions since they may fear the wage and employment consequences of investments abroad of domestic capital, or the impact of financial openness on welfare policy and redistributive taxation (Hicks and Swank 1992). To test whether there exists any relation between political orientation and the intensity of financial repression, a dummy variable (LEFT) is used that takes the value of 1 in case of left-centre complexion or left-wing dominance, and 0 otherwise. Non-democratic regimes of Southern countries such as Spain, Portugal and Greece have been classified as right-wing governments with 0 score. Apart from partisan divides, the clarity of political responsibility may affect the ability of a government to implement financial reforms. One dimension of this political aspect is majoritarianism (Quinn and Inclan 1997: 791). Governments based on majoritarian rule can find it easier to reach an agreement on tax increase, thus can have lower incentives to resort to implicit taxation. They can also depend less on the support of a large number of different constituencies, thus having lower incentives to allocate resources for political purposes. Moreover, as a large literature on financial liberalization emphasises, coalition governments may easily get caught in a stalemate, since the conflict between different groups over the distribution of the cost of reforms may end up in a prolonged war of attrition (Alesina and Drazen 1991). Thus, in principle, we could expect majoritarian governments to resort less to financial repression and to implement earlier financial reforms. To test for this hypothesis, a dummy variable (MAJOR) is used that takes the value of 1 in case of majoritarian government, and 0 otherwise (coalition or minority government). In the same vein, fragmented political systems may encounter more difficulties in keeping budgetary discipline or may be more prone to struggle to allocate resources to fragmented constituencies; in order to control for this effect, we use the number of parties present in Parliament as an additional variable (PARTY) which proxies the level of fragmentalization of the party system.

#### **4. Empirical results**

The baseline specification of the model is as follows:

$$GAP_{i,t} = c + x_t + a FISC_{i,t-1} + \beta X_{i,t-1} + e_{i,t}$$

The model is estimated by using a panel with pooled data for benchmark years at quinquennial intervals, which exploits changes over time in time-varying determinants

while retaining identifying variance for time-invariant characteristics in cross section.<sup>2</sup> Secondly, an instrumental variable approach is adopted to address possible endogeneity problems caused by simultaneity and reverse causality; in order to obtain unbiased and consistent estimates, I use two-stage least squares (2SLS) with lagged dependent and independent variables as instruments.<sup>3</sup> Time fixed effects are used in order to address possible biases due to composition effects due to the unbalanced characteristic of the panel, and also to account for the contemporaneous shocks affecting all countries (such as oil shocks, by instance). No country fixed effects are used, on the contrary, since time-invariant variables are most likely to pick up some of them. All variables are log-transformed, so that coefficients can be interpreted as elasticities. All equations are estimated in levels and give White-corrected heteroskedasticity-robust standard errors.

Table 1 presents the preliminary results. As a first step, I test the impact of fiscal variables on financial openness after controlling for institutional characteristics (col.1-5). The initial efficiency of the tax system, captured by the GDP ratio of tax revenues (REVINIT), is positive and significant, suggesting (in line with a public finance interpretation) that governments with a large tax base were generally more favourable to financial liberalization. It is interesting to notice that, being REVINIT strongly correlated to the initial GDP ratio of government expenditure (correlation coefficient 0.831)—which we can consider a measure of the initial size of government—results suggest that countries with already large governments by the late 1950s espoused more liberal attitudes. The intuition is that, unlike countries with advanced tax systems and welfare states, countries with relatively small tax base and willing to converge towards North-European welfare patterns could do that only by resorting systematically to inflationary finance and to its corollary, financial repression. This story of “welfare convergence”, however, which seems to fit in very well with Mediterranean countries, is not exempt from problems. By instance, West Germany and Switzerland, two of the most liberal countries in the sample, also had quite low revenue ratios at the end of the 1950s.

The results of the baseline equation also suggest that inflation (a measure of the intensity with which governments resorted to implicit taxation such as seigniorage), which is negative and significant, had a negative impact on financial liberalization. This result is confirmed by alternative fiscal variables such as the budget deficit (col. 3) and

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<sup>2</sup> The panel approach is particularly helpful since some variables have little “within” variation in each benchmark year.

<sup>3</sup> The use of the lagged dependent variable as an instrument is warranted because government policies have inertia, so that past policy constraints current policy (Quinn and Inclan 1997: 786).

the size of the government as a borrower from the banking system (col. 4). On the contrary, no evidence is found of any significant impact of financial repression (proxied by the size of reserve requirements imposed by monetary authorities to commercial banks) (col. 5). As to the institutional control variables, the results suggest that governments with strong constitutional constraints and countervailing powers, such as an independent central bank, were generally more favourable to financial liberalization. On the contrary, the variable CORP, capturing the degree of corporatism, gives unstable results, although in two cases (col. 3 and 4) it turns out positive and significant.

These results are generally robust to the inclusion of a number of control variables (col. 6-12). The coefficients on two different measures of financial development (the GDP ratios of the bond market and M2) are positive and significant (col. 6-7), suggesting that financial liberalization was retarded by the relative underdevelopment of the financial system—which in turn is usually explained by excess regulation of banking systems and capital markets. High trade exposure is consistently found to have a negative and significant impact on financial liberalization (col. 8-12), which runs somehow counter to the intuition that trade openness enhance financial openness. Interestingly, we find that the quality of social insurance (as captured by the GDP ratio of social transfers, SSTRAN and SSTRANINIT, col. 9, 10 and 12) are positively related to financial liberalization, suggesting that governments that guaranteed better social insurance to their citizens felt less compelled to maintain controls on external financial transactions—again, evidence in line with the “welfare convergence” story. Finally, the positive and significant coefficient on GDP per capita (col. 11-12) suggests that richer countries were more willing to embrace financial liberalization, which is a result in line with expectations. Of the political control variables (col. 13-15), the coefficient on party fragmentation is positive and significant—a result at odds with the general idea that governments facing fragmented constituencies are more prone to budgetary indiscipline, thus more inclined to financial repression and capital controls.

## 5. Conclusions

The preliminary results of this empirical exercise point to a possible explanation of delayed financial liberalization in line with a public finance approach. In relatively rich countries with large tax base and developed welfare states at the beginnings of the 1960s, whose citizens enjoyed high quality social insurance, governments felt less

compelled to maintain binding regulations on external financial transactions. Constitutional constraints, including an independent central bank, were also elements favourable to financial liberalization. In turn, liberalization was kept at bay where governments heavily resorted to large deficits and inflationary finance, thus playing a greater role in the mechanism of credit allocation.

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## APPENDIX

### Variables: Definition and Sources

#### Variables used to construct the Financial Repression Index (Section 2)

RESREQ: ratio of bank reserves to total bank deposits

GOVBANK: ratio of commercial banks' claims on government to claims on the private sector.

M2GDP: ratio of M2 to nominal GDP.

REV: ratio of central government revenues to nominal GDP

DEF: ratio of central government budget balance to nominal GDP (- = deficit)

DEBT: ratio of central government debt to nominal GDP

**Source: IMF International Financial Statistics CD-ROM**

BONDSGDP: ratio of bond issues to GDP

*Source: OECD Financial Statistics, Domestic Markets and Interest Rates*

BANK: Index of central bank independence. Summary index of different measures.

Takes values from 1 (maximum independence) to 3 (maximum dependence).

OPEN: Quinn Index of financial openness based on statutory regulation of international transactions. Takes values from 0 (minimum openness) to 14 (maximum openness).

CONSTR: Index of constitutional constraints. Takes value from 0 (low constraints) to 5 (high constraints).

CORP: Siaroff Index of "integration", considered a proxy for corporatism. Takes values from 1 (low corporatism) to 5 (high corporatism)

TRADEXP: ratio of imports to GDP

LEFT: dummy variable taking value of 1 when left-wing government in power, 0 otherwise. Based on an Index of Ideological Complexion of Government and Parliament.

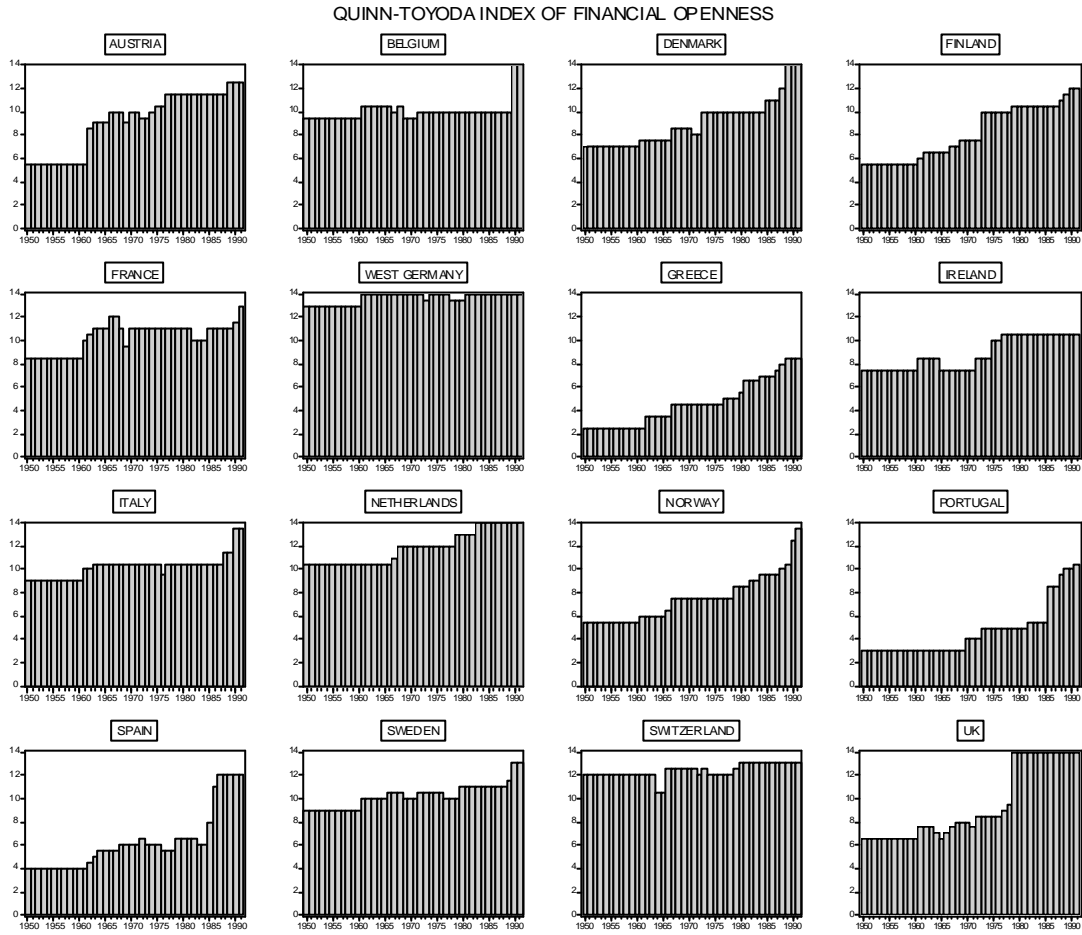
MAJOR: dummy variable taking value of 1 when majoritarian government in power, 0 otherwise (coalition or minority government). Based on an Index of Type of Government.

EFFPAR: number of effective parties in Parliament

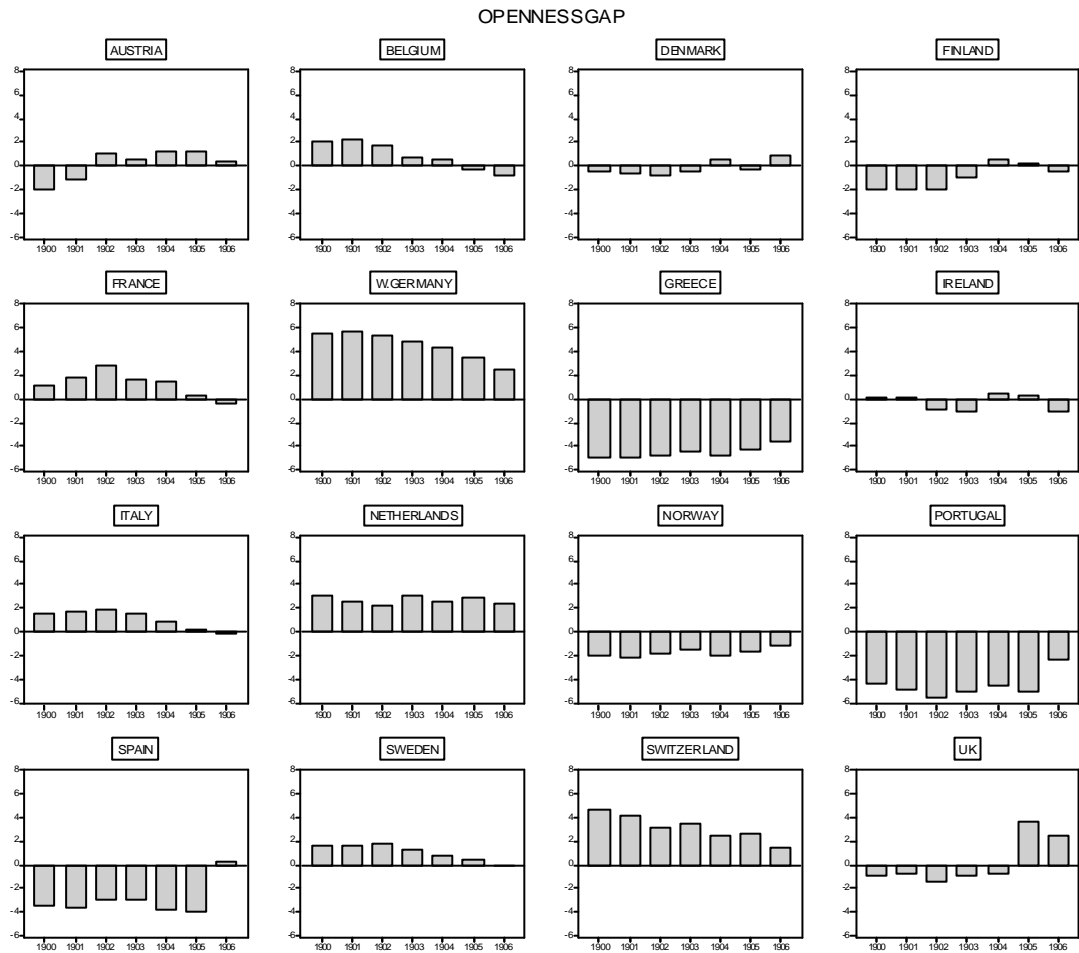
*Source: Armigeon et al (2001), CPDS-Comparative Political Data Set 1960-2001*

# FIGURES

Figure 1



# Figure 2



**Table 1 Results of benchmar regressions**

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
fiscal variables															
REVINIT	2.730 (5.38)***	3.201 (6.54)***	3.585 (6.00)***	4.311 (4.84)***	3.585 (5.81)***	2.870 (4.63)***	3.278 (6.01)***	3.64 (8.01)***	3.48 (9.51)***	3.696 (8.83)***	2.754 (5.98)***	3.286 (6.86)***	3.256 (6.75)***	3.474 (5.94)***	2.802 (6.57)***
INF	-4.53 (-3.57)***	-3.437 (-2.46)**				-5.077 (-2.95)***	-3.760 (-2.51)**	-2.816 (-2.35)**	0.136 (0.081)	0.325 (0.19)	-1.222 (-2.16)**	1.767 (1.10)	-3.266 (-2.22)**	-1.621 (-1.23)	-3.299 (-2.59)**
BUDGET			0.012 (4.86)***												
GOVBANK				-0.081 (-2.31)**											
RESREQ					-0.067 (-1.21)										
control variables															
CONSTR	0.249 (4.27)***	0.251 (4.58)***	0.291 (5.77)***	0.319 (4.75)***	0.339 (4.73)***	0.138 (2.41)**	0.244 (5.00)***	0.242 (4.87)***	0.264 (4.88)***	0.335 (5.38)***	0.229 (5.65)***	0.317 (6.35)***	0.255 (5.42)***	0.221 (5.34)***	0.205 (3.97)***
CORP	0.006 (0.061)	-0.021 (-0.28)	0.048 (2.32)**	0.065 (2.79)***	-0.012 (-0.20)	-0.249 (-3.55)***	-0.021 (-0.26)	0.091 (0.95)	0.022 (0.53)	-0.060 (-2.10)**	-0.141 (-5.42)***	-0.154 (-5.89)***	-0.036 (-0.41)	-0.130 (-2.33)**	-0.138 (-2.37)**
BANK		-0.158 (-3.91)***	-0.191 (-8.56)***	-0.238 (-6.85)***	-0.248 (6.63)***	-0.184 (-2.61)**	-0.133 (-3.23)***	-0.159 (-4.396)***	-0.239 (-3.84)***	-0.217 (-3.67)***	-0.171 (-6.46)***	-0.241 (-4.29)***	-0.169 (-3.33)***	-0.242 (-4.40)***	-0.221 (-4.03)***
BONDSDGP						0.124 (3.25)***									
M2GDP							0.077 (1.87)*								
TRADEXP								-0.158 (-4.34)***	-0.113 (-3.70)***	-0.756 (-9.95)***		-0.356 (-4.55)***			
SSTRANINIT								0.234 (2.16)**							
SSTRAN									4.442 (2.71)***			3.958 (2.84)***			
GDP PC										0.518 (10.39)***		0.378 (7.31)***			
LEFT													0.047 (1.03)		
MAJOR														-0.240 (-1.77)*	
PARTY															0.233 (3.13)***
Sample	1968-91	1968-91	1968-91	1968-91	1968-91	1973-91	1968-91	1968-91	1968-91	1973-91	1968-91	1973-91	1968-91	1968-91	1968-91
Cross sectios	14	14	14	14	14	13	14	14	14	14	14	14	14	14	14
Pnael (unb.) observatios	69	69	66	67	69	51	69	69	69	56	69	56	69	69	69
Adjusted R2	0.525	0.572	0.525	0.571	0.581	0.626	0.561	0.601	0.711	0.775	0.700	0.807	0.574	0.670	0.655
Jarque Bera (prob)	0.415	0.673	0.905	0.747	0.356	0.754	0.697	0.505	0.994	0.547	0.451	0.172	0.742	0.893	0.232
Time fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no

Note. Estimates by panel two stage least squares with White cross-section, heteroskedasticity-robust standard errors and covariance (d.f. adjusted).

Instruments are lagged endogenous and exogenous variables. T-statistics in parenthesis. \*, \*\* and \*\*\* denote significance at 10, 5 and 1 per cent level.

Jarque-Bera statistics test normality of residuals