November 2001
IMF Country Report No. 01/203

Selected Euro-Area Countries: Rules-Based Fiscal Policy and Job-Rich Growth in France, Germany, Italy, and Spain — Report with Supplementary Information

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International Monetary Fund
Washington, D.C.

INTERNATIONAL MONETARY FUND

SELECTED EURO-AREA COUNTRIES

Rules-Based Fiscal Policy and Job-Rich Growth in France, Germany, Italy and Spain

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Approved by the European I Department

October 3, 2001

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I. Overview

1. Background work for the Article IV consultations with France, Germany, Italy, and Spain has been pooled and focused on two topics: fiscal policy frameworks and the job-intensity of growth. The topics are highly relevant to macroeconomic performance and policy making in all four countries. Fiscal frameworks take on added importance in a monetary union and need to address ongoing tensions between long-term consolidation goals and short-term policy objectives. Such tensions are currently quite prominent as the economic slowdown puts budget deficit targets under pressure. And adequate job creation has been one of Europe's long-standing economic problems: understanding the factors behind the seemingly better employment performance of the last few years will provide pointers for making further progress in reducing still-high unemployment. The main analysis and conclusions are presented here. Some further information can be found in the Supplementary Information paper.

2. The work on fiscal frameworks (Chapter II) explores the benefits of rules-based approaches to policy making in the four countries. Fiscal rules attempt to constrain policy by committing the authorities to targets for deficits, debt, or public expenditure. In principle, rules can help to counteract the deficit or spending bias that may be inherent in a discretionary policy framework, given the structure and incentives that typically reside within political systems. At the same time, rules need not constrain the room for counter-cyclical fiscal policy—a potential advantage of a discretionary framework, albeit one that is frequently not realized.

3. Chapter II argues that the four countries should place more emphasis on spending rules within the boundaries set by the Stability and Growth Pact. At present, fiscal frameworks are geared to achieving balances around zero in the medium term. En route, annual deficits are meant to follow declining paths as articulated in each country's Stability Program. This chapter suggests that countries should maintain medium-term targets for the budget balance—or, alternatively, the stock of public debt—geared to long-term policy objectives. But it points out that rigid adherence to annual deficit targets can impart a pro-cyclical bias to fiscal policy through contractionary measures to buttress revenues in a downswing and a temptation to spend windfall tax receipts in an upswing. A binding spending rule that was consistent with the medium-term deficit or debt target and with tax policy objectives would allow cyclical revenue fluctuations to be reflected in annual outcomes for the budget balance. But it would not sacrifice—and perhaps it would even enhance—policy credibility. Nonetheless, designing an effective spending rule is not straightforward: should spending rules be real or nominal? how comprehensive should the definition of spending be? what safeguards can be put in place to ensure that the rules are credible? how can they be made to work in a decentralized system where regions/states enjoy considerable autonomy? Chapter II reviews the implementation issues and provides some practical answers to these and other questions.

4. Chapter III examines the factors behind the improved job-creating records of the four countries in the second half of the 1990s. Economic growth in the two cycles prior to the current downturn was unusually "job rich". That is, employment responded more buoyantly

to output growth than it had in the past—although the case of Germany requires some qualification as many of the new jobs created were of a part-time nature such that employment performance on a full-time-equivalent basis was not notably strong.

5. The analysis suggests that a prolonged period of wage moderation has been the main factor behind job-rich growth. Wage moderation is defined as an outward shift in the labor supply, or wage, curve. Theoretical considerations suggest that wage demands should vary negatively with unemployment—high unemployment will cause workers or their representatives to be more fearful of the consequences of high wage demands. Allowing for this relationship, wage moderation represents a degree of restraint that goes beyond what might be expected at a given level of unemployment. Shifts in the wage curve might occur because of changes in taxes or benefits, which affect the relative cost of being out of work. Or they may occur because of a change in the behavior of wage bargainers: for instance, unions might decide to put more weight on jobs, as opposed to merely income levels, or their bargaining power might be undercut because of dwindling membership.

6. Wage moderation is estimated to have set in around the middle of the 1980s in all four countries, although it was temporarily interrupted in the early 1990s. The effects of wage moderation on job creation appear to have been offset until the mid-1990s by a shift in labor demand—partly for tax reasons and partly for technological reasons, firms had an increasing preference for more capital-intensive production methods. As labor demand stabilized in the mid-1990s, and wage moderation continued, employment growth began to take off. The less impressive results in Germany are consistent with wage moderation being less pronounced—and interrupted to a greater extent as a result of reunification—than in the other countries. Wage moderation appears to reflect more a shift in union preferences or bargaining power than changes in tax or benefit systems. Other factors, such as improvements in the regulatory environment, targeted cuts in social security contributions, and active labor market policies also contributed to job-rich growth in some countries. Nonetheless, high structural unemployment and the substantial disparities in unemployment rates across regions and skill groups point to the need for not only continued wage moderation but also measures to improve job search incentives, cut labor market regulations further, and promote greater wage differentiation.

II. Rules-Based Fiscal Policy and the Fiscal Framework in France, Germany, Italy, and Spain

A. Introduction

7. **In recent decades, France, Germany, Italy, and Spain, along with most industrial countries, witnessed a sharp rise in the size of government as well as a large accumulation of public debt.** While the latter trend has recently begun to be reversed, under the constraints imposed by the Maastricht Treaty and the Stability and Growth Pact, public expenditure and debt remain high by international standards. These are well recognized sources of concern to policymakers, especially as the rapid aging of the population will increase spending on pensions and health care while reducing the labor force and therefore economic growth and the tax base.

8. **In practice, reducing public spending and government debt is politically difficult, as the process inevitably leaves some groups worse off.**[1] To overcome these difficulties, an increasing number of countries have adopted formal fiscal rules, such as balanced-budget rules, or multiyear frameworks that limit discretionary fiscal policy.[2] The proponents of rules argue that the commitment to a medium-term plan for the public finances makes it easier for fiscal authorities to withstand pressures for higher spending and for delaying fiscal adjustment. Critics highlight that rules may constrain the ability of governments to run counter-cyclical fiscal policy and express skepticism on the effectiveness of rules, because of the scope for creative accounting.

9. **This chapter studies the design of fiscal rules and frameworks with particular reference to France, Germany, Italy, and Spain.** In different ways, these countries face substantial public finance challenges over the next decade, due to the high level of outstanding public debt (Italy in particular), the consequences that a rapidly-aging population entails for future social spending, and the need to ensure adequate scope for reduction of the still high tax burden while maintaining an adequate level of public-sector capital spending. This chapter addresses how additional rules could be devised to constrain the behavior of policymakers in these four countries. Such rules would necessarily operate within the broader constraints set by the Maastricht Treaty and the Stability and Growth Pact, which establish

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[1] This problem has been widely studied, both theoretically and empirically, by the political economy literature, which has analyzed how conflicts of interest are shaped by the political system and budget institutions (see Chapter I of the Supplementary Information paper).

[2] These frameworks exhibit considerable variety regarding the choice of target, degree of flexibility, and other characteristics. While most countries adopting rules in recent years have experienced substantial fiscal consolidation, this has happened against a background of favorable economic conditions. Whether these rules can survive a downturn remains a largely untested proposition. Chapter II of the Supplementary Information paper reviews selected country experiences.

safeguards to ensure that monetary union is not jeopardized by fiscal profligacy in one member country. The key issues are the choice between deficit and expenditure rules, enforcement, and the relationship among different levels of government.

10. **While other countries have experienced similar difficulties in controlling fiscal expansion and face similar challenges looking ahead, this chapter focuses on these four countries alone mainly for reasons of** tractability. Examining the design of fiscal rules from both a theoretical and a practical perspective requires reviewing the specific institutional setting of each country as well as the recent experience with fiscal policymaking, a task that would quickly become unwieldy if carried out for a larger set of countries. In addition, the four countries share a number of common characteristics such as belonging to EMU and facing potentially serious long-term fiscal imbalances because of population aging, and they have not been at the forefront of recent experimentation with multiyear fiscal frameworks.

11. **This chapter is structured as follows**. The next section reviews fiscal policy, the fiscal framework, and the outlook in the four countries. Section C discusses the rationale for fiscal rules, the costs and benefits of alternative rules, enforcement and compliance issues, and the question of how to ensure fiscal discipline in federal systems. Section D provides a brief analysis of how the rules may alter the response of the economy to a fiscal shock. Section E summarizes our conclusions.

B. Fiscal Policy and the Fiscal Framework in France, Germany, Italy, and Spain

Fiscal consolidation in the last ten years

12. **Fiscal deficits and the public debt grew throughout much of the postwar period in most industrialized countries under the pressure of rising public expenditure, a trend that began to reverse after 1992** (IMF, 2001). While the improvement in the government financial position was fairly universal (Japan being a notable exception), the largest turnaround was probably in a group of Anglo-Saxon countries (Figure 1), where relatively fast economic growth also facilitated the process of consolidation.[3] Fiscal adjustment in advanced countries was based especially on expenditure restraint though tax increases played a larger role in the euro area—particularly in France and Germany (Figure 2).[4]

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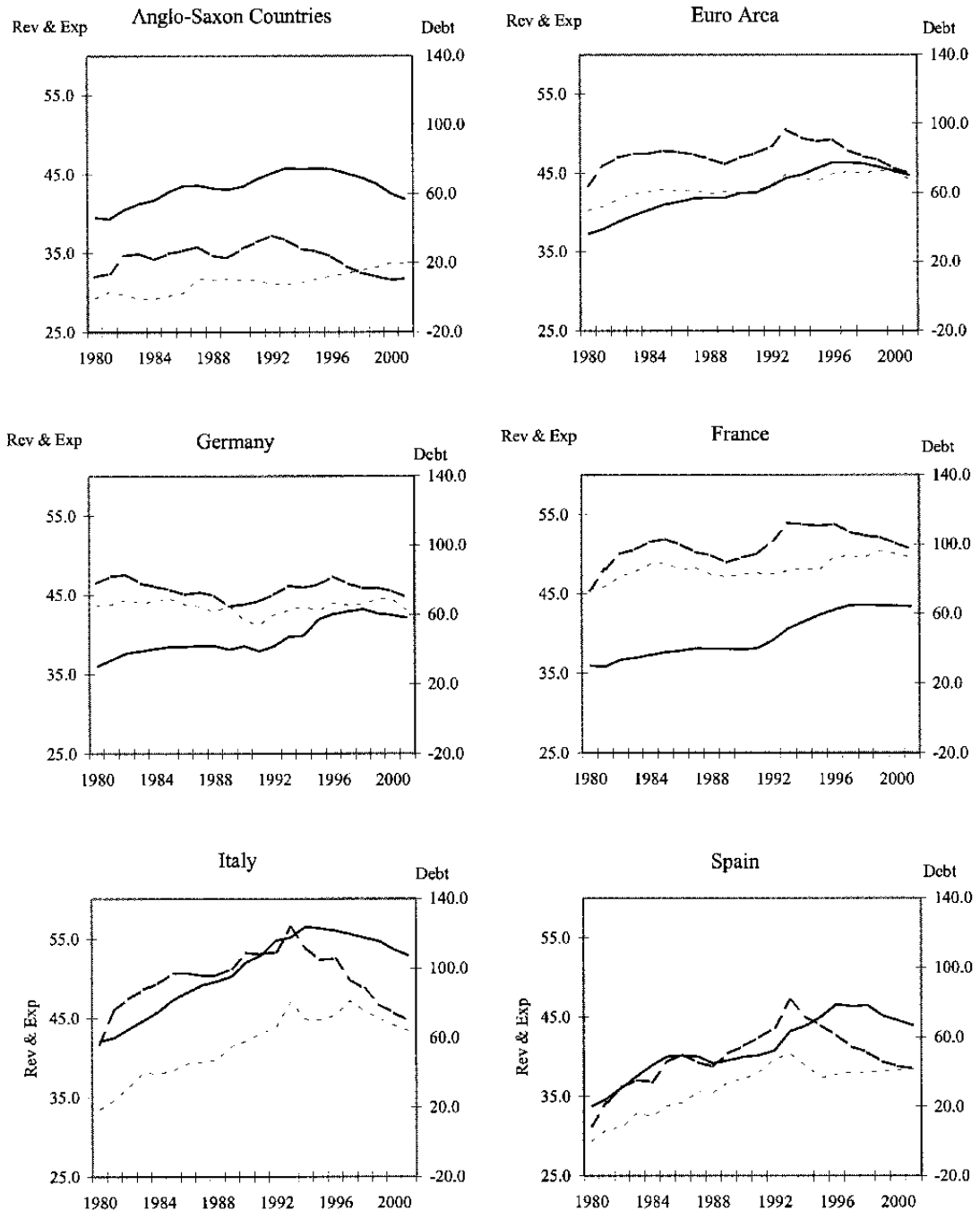
[3] This group includes Australia, Canada, New Zealand, the United Kingdom, and the United States.

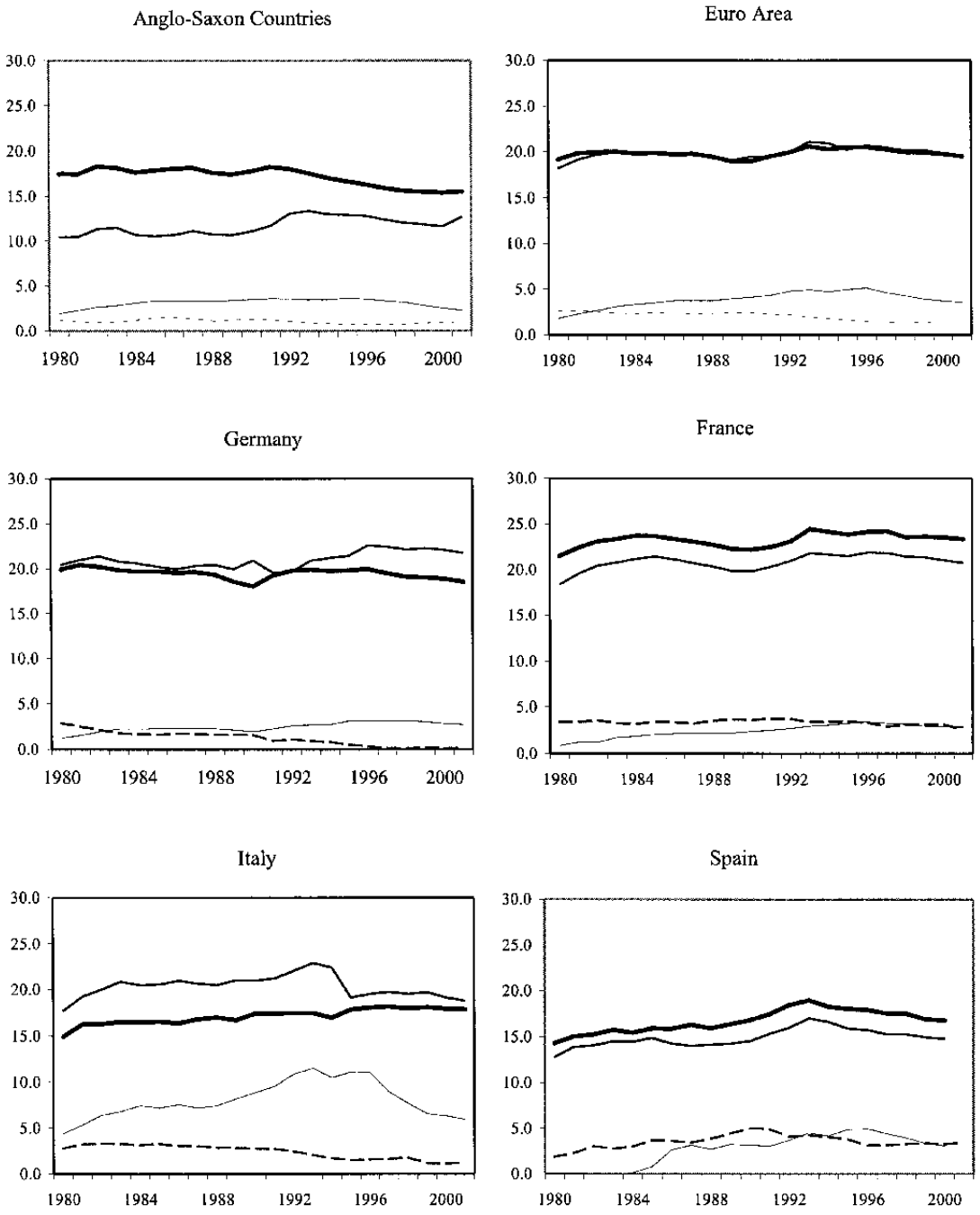
[4] In Italy and Spain, a substantial fraction of expenditure reduction was the result of lower interest payments due to declining risk premiums on government securities.

Figure II.1. Selected Countries: Government Revenue, Expenditure, and Debt
(Percent of GDP)



Source: OECD Analytical and Economic Databases
(UMTS Receipts are excluded from revenue and disbursements)

Figure II.2. Selected Countries: Composition of Expenditures
(Percent of GDP)



Source: OECD Analytical and Economic Databases (UMTS Receipts are excluded)

13. **A number of studies argue that fiscal consolidation associated with expenditure restraint, particularly reductions in primary current expenditure, has proved more durable historically.**[5] Figure 2 indicates that, in the four countries covered in this study, the adjustment effort on transfers and subsidies has been relatively modest or non-existent. Furthermore, in contrast with the Anglo-Saxon countries, and with the possible exception of Spain, spending on goods and services remains near historical highs. Somewhat troubling also is that reduced capital outlays accompanied the recent decline in expenditure ratios in the euro area, although this may partly reflect privatization. The consolidation was helped by an increase in revenues, which further raised the already high tax burden (Figure 3). In the four countries that are the subject of this study the tendency has been to reduce direct taxes and social security contributions and rely more on indirect taxes.

14. **All in all, the fiscal consolidation necessary to qualify for EMU was a major achievement but also a difficult process in the four countries.** While several temporary tax increases were enacted, primary current expenditure reduction was limited, raising questions about the durability of the improvements in the public accounts. After the inception of EMU in 1999, further progress in fiscal adjustment was made, but this was supported by favorable cyclical conditions that yielded revenue over-performance.

Fiscal policy and the business cycle

15. **An important characteristic of fiscal policy is its potential role as a tool to stabilize aggregate demand shocks.** This role is arguably more important in countries belonging to a monetary union, where monetary policy is set to respond to area-wide developments and not to country-specific shocks.[6] In Western Europe, inflexible labor markets may also reinforce the need for countercyclical policies. One of the criticisms levied at fiscal rules is that, by limiting discretion, they take away an important instrument of macro-economic stabilization and may even cause fiscal policy to be pro-cyclical. In practice, however, this loss may not be so important if, under discretion, fiscal policy tends not to be used for stabilization.[7] For instance, there may be a tendency for new spending programs to be introduced during cyclical upturns, when budgetary resources are more easily available, resulting in a pro-cyclical fiscal stance. In this case, fiscal rules that limit spending or the deficit may actually reduce pro-cyclicality. In addition, by making fiscal policy more stable and predictable, fiscal rules may reduce a source of shocks to aggregate demand.

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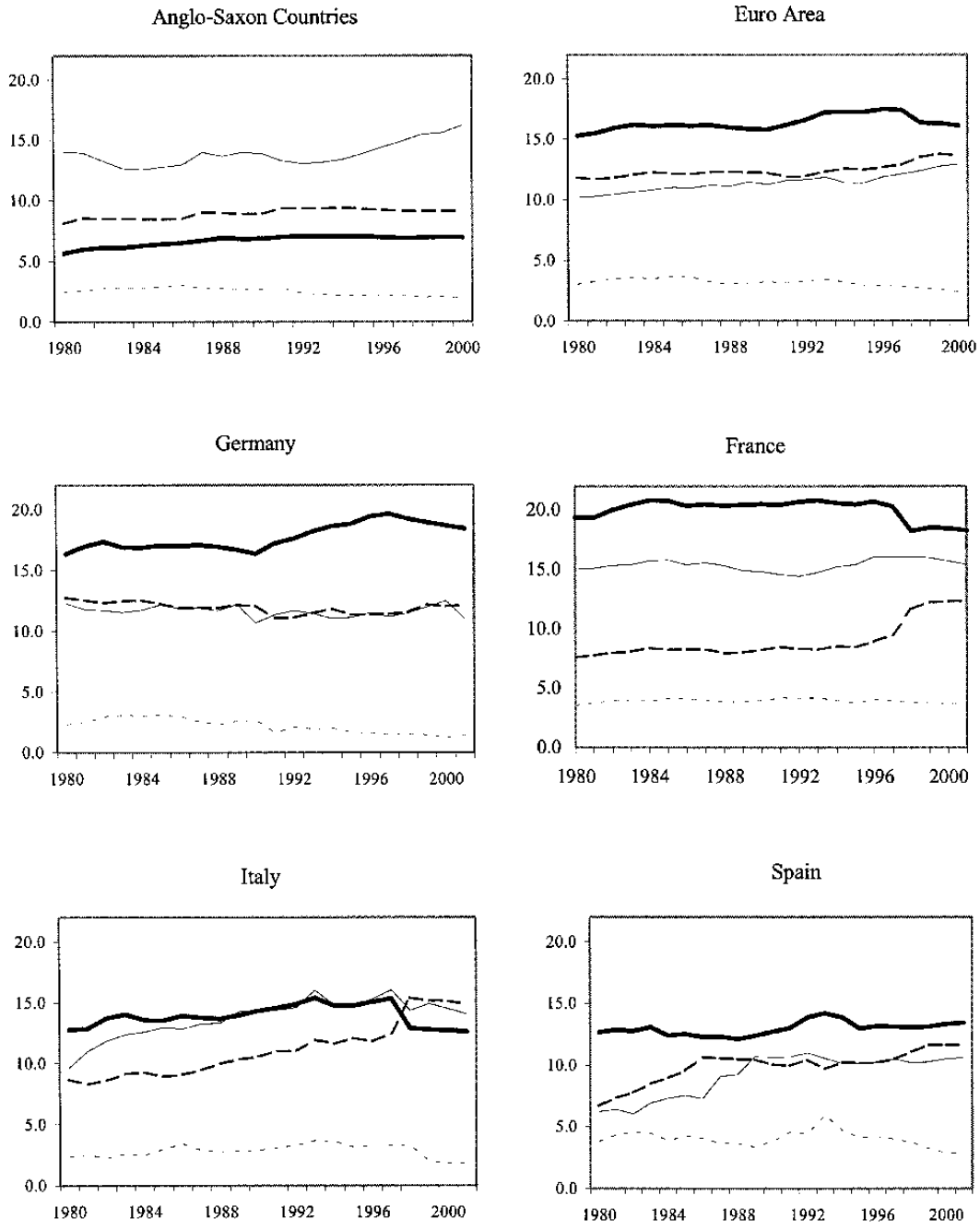
[5] Alesina and Perotti (1997), IMF (1996), Alesina and Ardagna (1998), Perotti, Strauch, and von Hagen (1998), and von Hagen, Hughes-Hallett and Strauch (2001).

[6] Countries with pegged exchange rates, such as France during the policy of the *franc fort,* may not lose much if they join a union.

[7] Moreover, rules can be designed to allow for some cyclical stabilization (see Section C below).

Figure II.3. Selected Countries: Composition of Revenue
(Percent of GDP)



Source: OECD Analytical and Economic Databases (UMTS Receipts are excluded)

16. **To shed some light on these issues, this section briefly explores fiscal policy over the cycle in the four countries.** Figure 4 plots an indicator of the cyclical situation (the output gap) against two indicators of the fiscal policy stance, the change in the overall balance and the change in the structural primary balance (the fiscal "impulse").[8] The period examined ends at the start of the EMU fiscal consolidation, when fiscal policy was arguably no longer free to react to the cycle.[9] If fiscal policy is countercyclical, periods of negative output gap should be accompanied by a deteriorating fiscal balance and vice versa. A deteriorating balance may reflect the operation of automatic stabilizers or discretionary measures. The fiscal impulse is used as a proxy of the discretionary components of fiscal policy, although this measure has well-known shortcomings.[10] Accordingly, if during a recession the deficit is widening but the structural primary balance improves, then discretionary intervention operates to partly offset the automatic stabilizers and vice versa.

17. **In the four countries fiscal policy was not consistently counter-cyclical (Figure 4).** While deficits typically widened at the beginning of a downturn, thus presumably helping cushion the effects of the adverse shock, the impulse often became contractionary as the recession continued. Likewise, the fiscal accounts often did not improve substantially during expansions, as higher-than-normal revenues were spent or used for tax cuts. Table II.1 summarizes some of the information in Figure 4. In all countries the fiscal impulse is negatively correlated with the output gap, suggesting overall pro-cyclicality, except in Spain, where the correlation is close to zero. The negative correlation is even stronger when the output gap is lagged, suggesting that pro-cyclicality is not explained by delays in learning about the structural position. An alternative measure of pro-cyclicality is the fraction of observations for which the output gap and the impulse have opposite sign. This fraction is above 50 percent in all four countries, confirming the pro-cyclical nature of fiscal policy.[11]

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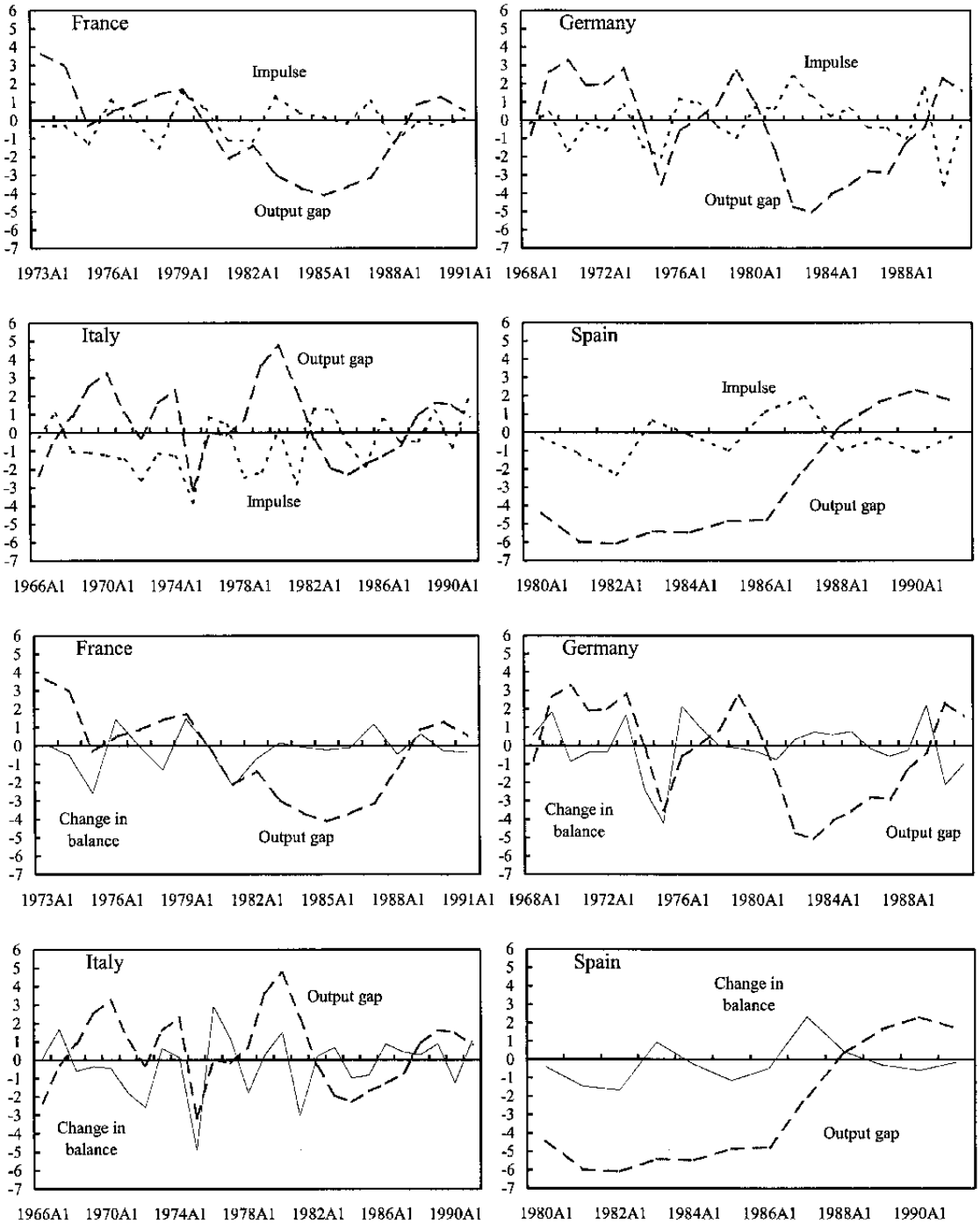
[8] According to this definition, a positive impulse corresponds to an improvement in the structural balance, and hence to a discretionary fiscal contraction.

[9] If the years after 1992 were included, fiscal policy would appear even less countercyclical.

[10] If trend growth in certain spending categories (such as entitlements) exceeds trend output growth, the fiscal impulse would tend to be negative even in the absence of any discretionary policy measure. In addition, calculations of structurally-adjusted balances are difficult, and different methodologies can give rise to very different results (Hagemann, 1999, Giorno *et al.*, 1995). A third problem is that such calculations typically compute tax revenues using long-run elasticities. If short-run elasticities tend to be pro-cyclical (with tax revenues growing faster than GDP during expansions and vice versa)—as suggested for instance by Quinet and Mills (2001)—then the calculated structural balance will be too smooth, and the discretionary component will appear more counter-cyclical than it is in actuality.

[11] If fiscal policy had been set randomly with respect to the cycle, for a sufficiently large number of observations the value of the index should be 50 percent.

Figure II.4. Selected Countries: Fiscal Policy and the Cycle



Note: The impulse is defined as the change in the structural primary balance.
Source: OECD.

Interestingly, the four countries found it especially difficult to save the cyclical component of the improvement in the balance during expansions (Table II.1).[12]

Table II.1. Fiscal Policy and the Cycle Before Maastricht

Period covered	France 1973-1991	Germany 1968-1991	Italy 1966-1991	Spain 1980-1991
Correlation coefficients:				
Change in the primary structural balance and output gap	-12.3	-34.3	-6.1	1.7
Change in the primary structural balance and lagged output gap	-11.9	-26.8	-30.4	-13.2
Change in the balance and output gap	6.3	3.5	20.2	26.4
Change in the balance and lagged output gap	-26.1	-37.4	-46.2	-0.2
Pro-cyclicality index[1]	57.9	61.5	61.5	64.3
Fiscal expansion with positive gap[2]	77.8	72.7	73.3	100.0
Fiscal contraction with negative gap[3]	50.0	46.7	45.5	37.5

Source: OECD and staff calculations.

[1]Percentage of years in which output gap and change in the primary structural balance had different signs.

[2]Percentage of periods with positive output gap in which primary structural balance deteriorated.

[3]Percentage of periods with negative output gap in which the primary structural balance improved.

18. **But why was fiscal policy so seldom counter-cyclical?** One possible answer is that policymakers were deliberately avoiding "fine tuning," because output gaps are difficult to gauge and fiscal policy affects the economy with delay. In addition, monetary policy was available to smooth the cycle, especially in the early years in which substantial capital controls were still in place. These considerations, however, can at best explain a neutral fiscal impulse, not a pro-cyclical one. Fiscal tightening in the late phase of a downturn may be caused by the fact that, after rising sharply early on, the deficit becomes unsustainable (economically or politically), thus forcing a discretionary contraction (Artis and Buti, 2000). This would suggest that to conduct counter-cyclical fiscal policy there needs to be a comfortable budgetary margin during normal times. To explain why fiscal policy turns expansionary during upturns, it may be conjectured that policymakers tend to be overly optimistic or just myopic, and fail to recognize the temporary nature of the fiscal improvements during cyclical upswings. In addition, political economy arguments suggest that it may be difficult to stand up to pressures from spending ministries or organized interest groups to share the growth dividend during good times, when budgetary resources are available (Tornell and Lane, 1999).

[12] These issues are explored for a wider set of countries and alternative methodologies in "Cyclical Fiscal Policy Behavior in EU Countries," a Selected Issues paper for the 2001 Euro area Article IV consultation. The results are broadly similar to those presented here.

The fiscal framework

19. **In joining the European Monetary Union, the four countries under consideration committed to a prudent fiscal policy**. Specifically, under the Maastricht Treaty the countries must keep the general government deficit within 3 percent of GDP except for exceptional and temporary reasons, and the gross general government debt must be below 60 percent of GDP; for countries joining EMU with debt above that threshold, substantial progress should be made in reducing the debt. Countries that violate the Maastricht Treaty ceilings may be subject to pecuniary sanctions. Subsequent Council regulations and resolutions have further strengthened the framework of the Treaty, by committing member countries to maintaining a fiscal position "close to balance or in surplus" in the medium term, and by establishing monitoring procedures (the Stability and Growth Pact, SGP). The "close to balance or in surplus" target should provide enough room for the balance to deteriorate during a downturn without exceeding the 3 percent threshold, and it has been interpreted as applying to the cyclically-adjusted fiscal balance (see, for instance, Artis and Buti, 2000). The Commission has attempted to quantify the former concept by computing "minimum benchmarks" for each member country based on past history.[13]

20. **As part of the monitoring mechanism, every year countries present to the Ecofin Council their fiscal policy plans for the following four years (the Stability Programs, or SPs).** The Council issues an opinion on whether the plans are consistent with the SGP and, more generally, with principles of sound public finance. These programs contain only indicative targets and sometimes few specifics (for instance, they may not specify how the path of the balance breaks down between revenues and expenditures). In contrast with the deficit and debt ceilings of the Maastricht Treaty, there is no process to sanction deviations from the "close to balance or in surplus" target. Within the boundaries of the Maastricht Treaty and of the Stability and Growth Pact, countries can set fiscal policy according to their own national frameworks.

21. **In Germany the federal government, as well as many of the regional governments, has a constitutional obligation to adhere to the "golden rule," namely that borrowing should finance only capital expenditures.** However, the rule has imposed little budgetary discipline because it is applied ex ante rather than ex post. In addition, the definition of investment applied at the federal level is very broad (including financial as well as non-financial assets and excluding privatization and depreciation), it excludes special funds, and it can be violated if the government determines that the economy is not operating

[13] These benchmarks are defined as the difference between the 3 percent reference value and the "cyclical safety margin." The latter is obtained by multiplying the output gap for the cyclical sensitivity of the budget calculated using historical data (European Commission, 2000). The benchmarks are a deficit of 1.6 percent of GDP for France and Italy, of 1.4 percent for Spain, and of 1.1 percent for Germany.

at the "national equilibrium."[14] More recently, in the SPs the German government has undertaken to keep nominal spending growth at or below 2 percent per year at the level of the general government. No rules to deal with spending overruns are specified, however.

22. **In its SPs, France sets out multiyear rates of increase of real expenditure for the three components of general government, the central government, social security, and local authorities.** In practice, multiyear expenditure growth targets are not treated as binding, however, especially not on a year-by-year basis. In fact, on current plans real expenditure growth during 2000–02 and 2001–03, respectively, will exceed that envisioned in the earlier SPs covering the corresponding periods. For 1999–2003, real expenditure is projected to exceed the initial target by a cumulative 2.2 percent, and no plans for clawing back the overruns exist.

23. **In Italy and Spain no multiyear rule beyond the SGP framework exists at present.** In Spain, however, a new law currently submitted to Parliament will, if approved, shift fiscal policymaking to a much more strongly rules-based model. Under the draft law, all levels of government would have to formulate, approve, and execute a budget in balance or in surplus. If, due to exceptional circumstances, they fail to present a balanced budget, they would have to explain the reasons, identify the revenue or expenditure items responsible, and formulate a fiscal adjustment program for the medium term including corrective actions. In addition, the cabinet would set fiscal targets for each level of government and impose limits on central government expenditures for a three-year period. A contingent liability fund equal to 2 percent of the maximum central government expenditures would provide some flexibility. The accounting standard would be ESA-95. All public entities including public enterprises would have to formulate their budget in a multiyear framework. The Ministry of Finance would be in charge of monitoring whether the law is respected by all levels of government. Finally, the law establishes that, in case the EMU deficit or debt ceilings are breached, the cost of the sanctions are to be distributed among levels of government according to their respective contribution to the breach.

The structure of the general government and relationships among different levels of government

24. **In all four countries important areas of government activity are carried out by social security funds (Table II.2).**[15] Social security funds, while large, tend to be closely integrated with the central government in Germany, Italy, and Spain. In France, they are jointly managed by the central government and the social partners, though the distinction among the activities of the two branches of the general government has become increasingly blurred.

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[14] Wendorff (2001) shows that, using a standard definition of investment, the rule was violated ex post in nineteen out of the past 20 years at the level of the general government.

[15] Of course, the numbers in Table II.2 do not indicate who controls the revenue or expenditure policy decisions.

Table II.2. Structure of the General Government in 1999
(In percent of GDP)

	France	Germany	Italy	Spain
Expenditures[1]				
Central government	27.2	14.65	25.2	22.2
Social security funds	23.8	21.42	17.1	17.2
Subnational governments[2]	9.9	21.1	13.7	14.0
Revenues[3]				
Central government	18.6	13.11	28.7	20.9
Social security funds	20.9	21.7	12.7	17.8
Subnational governments[2]	10.2	21.0	13.1	13.8

Sources: National authorities; IMF, Government Financial Statistics Database; and staff calculations.

[1]Includes transfers to other levels of government.

[2]In Germany and Spain state government and municipalities on an unconsolidated basis.

[3]Includes transfers from other levels of government.

25. **Turning to subnational governments, in Germany, excluding intergovernmental transfers, expenditure by the federal government is smaller that of the subnational governments (the regions, *Länder*, and communes, *Gemeinden*).** In principle, sub-national governments have a large degree of autonomy, as the Constitution stipulates that public services are to be provided in a decentralized manner. However, expenditure policies are often determined at the central level, with lower levels of government in charge of the execution. The *Länder* have complete autonomy to borrow while the *Gemeinden* can only borrow with the approval of the *Länder*. *Länder* deficits averaged about 1 percent of GDP in the 1990s, the highest level for subnational governments in the European Union. An advisory intergovernmental council, the *Finanzplanungsrat*, coordinates fiscal policy across levels of government. In June 2001 this body expressed the continuing (although voluntary) commitment by all levels of government to abide by the 2 percent spending rule to meet the budget balance goals outlined in the SP. The fiscal projections of the *Finanzplanungsrat* and the SP were made public, including the expenditure and deficit targets of all levels of government separately on an administrative basis, as well as the conversion to a national accounts basis. The ceilings for nominal expenditure growth vary depending upon the year and the level of government and range between -1 percent per year (eastern *Länder* in 2002) and 2 percent per year (western *Länder* in 2003). These targets, which resulted from intense bargaining, are not legally binding rules.

26. **In France local authorities remain relatively small, with expenditures and revenues accounting for about 10 percent of GDP.** They operate under a "golden rule," mandating that current receipts must equal current expenditures. Receipts come from various local taxes, mainly under the control of Parliament, and from transfers from the central budget of the order of 30 percent of local governments' budgetary receipts.

27. **In Italy, there are three levels of local government: regions, provinces and municipalities.** There are 15 "ordinary statute" and 5 "special statute" regions, the latter having a higher degree of autonomy. As sources of revenue, regions rely on taxes, such as the IRAP (a tax on regional value added), and on government transfers. Special statute regions receive a substantial share of the revenue from national taxes produced in the region. An ongoing process of fiscal decentralization has recently increased the share of taxes earmarked for local authorities, resulting in tax revenues reaching 44 percent of total local authorities' receipts in 2000 (up from 25 percent in 1995). The ability to borrow has increased apace, with local authorities' public debt rising from 2.4 percent of GDP in 1995 to 3.4 percent of GDP in 2000.[16] In particular, local authorities have faced problems in controlling health care expenditure, and recent attempts to impose discipline through an internal stability pact have not been very successful (see Chapter IV of the Supplementary Information paper). To address these problems, the government has adopted in August-September 2001 a set of measures to strengthen regional expenditure control, particularly in the health area.

28. **In Spain, regional governments in the "Specific Regime" have extensive fiscal autonomy, while those in the "Common Regime" have more limited fiscal autonomy.** Every five years, the Council for Fiscal and Financial Policy (*Consejo de Política Fiscal y Financiera*), chaired by the Ministry of Finance and consisting of representatives of the regions, establishes the financial arrangements between the "Common Regime" regions and the central government. Regional governments have direct access to financial markets subject to several restrictions. As the law does not envisage any sanction, these restrictions have been violated on a number of occasions (Viñuela, 2001).

The current fiscal position and the medium-term outlook

29. **Thanks to recent fiscal consolidation, general government deficits were below 1.5 percent of GDP in all four countries in 2000 (Table II.3), although the economic slowdown and tax cuts in some countries are likely to result in deteriorating deficits in 2001.** The structural balance is even more favorable than the actual balance in France, Italy, and Germany, and slightly less favorable in Spain. Debt levels remain quite high, however, and in Italy very high. Concerning the outlook, the four countries are engaged in a medium-term strategy of further fiscal consolidation accompanied by some relief in the tax burden. The latter is still high relative to other OECD countries except in Spain (Table II.4). The taxation of labor remains particularly heavy because of large social security contributions (Table II.5). In Spain the need to upgrade infrastructure is expected to put upward pressure on government expenditures in the medium term.

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[16] These figures are net of borrowing from the *Cassa Depositi e Prestiti*, a special government body that finances subnational governments by issuing postal bonds in the retail market.

Table II.3. General Government Balance and Gross Debt in 2000
(In percent of GDP)

	Balance[1]	Gross debt	Structural balance (IMF)
France	-1.4	57.6	-1.1
Germany	-1.0	60.3	-0.5
Italy	-1.5	110.2	-0.7
Spain	-0.4	60.7	-0.8

Sources: National authorities and staff calculations.

[1]Excluding UMTS revenues.

Table II.4. Effective Tax Rates and Tax Burden (1999)

	Effective tax rate (In percent of tax base)				Tax receipts
	Non-wage labor costs	Personal income	Capital	Consumption	(Percent of GDP)
France	32.1	15.2	22.6	24.5	46.4
Germany	31.8	17.8	15.9	17.9	43.1
Italy	23.1	16.5	26.2	22.9	43.1
Spain	21.9	10.2	18.5	17.7	34.9
EUR-11	28.1	16.2	20.9	20.9	42.9
United States	11.6	13.9	22.7	9.3	29.9
Japan	16.5	4.6	18.7	13.6	28.2
United Kingdom	11.9	15.1	35.1	18.1	37.8

Sources: European Commission, Public Finances in EMU-2000 and OECD.

Table II.5. Income Tax plus Employer's and Employees' Social Security Contributions for a Married Worker With Two Children
(In percent of average wage)

	1998	2000
France	38.5	38.9
Germany	35.9	34.4
Italy	44.4	37.0
Spain	33.3	30.4
Canada	23.3	21.2
Japan	14.0	19.8
United Kingdom	24.9	23.3
United States	23.7	21.1

Source: OECD.

30. **The latest updates of the SP provide information concerning fiscal policy plans beyond 2001 for each country (Table II.6).** Under favorable economic growth assumptions, the authorities plan to reach a small budget surplus in 2004 in France, Italy, and Spain, and budgetary balance in Germany. Less optimistic assumptions, now more plausible in the light of the recent deterioration in the global economic outlook, would result in a small deficit in France, Italy and Germany, and in a budget close to balance in Spain.

Table II.6. Main Features of the 2000–04 Stability and Growth Program
(In percent of GDP unless otherwise specified)

	France	Italy	Germany	Spain
Central Scenario				
GDP growth (in percent)	3.0	3.1	2.5	3.2
General government balance in 2004	0.2	0.3	0.0	0.3
Less Optimistic Scenario				
GDP growth (in percent)	2.5	2.6	2.3	2.7
General government balance in 2004	-0.4	-0.4	-0.5	0.0

Source: National authorities.

31. **In a longer-term perspective, population aging is expected to increase considerably the financial burden of pensions and health care in the four countries, although the timing of the phenomenon varies because of different demographic situations (Table II.7).** While further pension and health-care reform and policies to foster higher employment and growth can ease the forthcoming pressure on the budget, the need to safeguard the standard of living of pensioners and the increasing preference for a shorter work life suggest that reforms may not fully eliminate the problem. Thus, in all countries the net asset position of the public sector needs to improve to make room for the additional spending without compromising sustainability.

Table II.7. Pension Expenditure Projections

	Pension expenditures projections (In percent of GDP, before tax)							
	2000	2005	2010	2020	2030	2040	2050	Change 2000-peak year
Central scenario								
France	12.1	12.2	13.1	15	16	15.8	n.a.	**3.9**
Germany	10.3	9.8	9.5	10.6	13.2	14.4	14.6	**4.3**
Italy	14.2	14.1	14.3	14.9	15.9	15.7	13.9	**1.7**
Spain	9.4	9.2	9.3	10.2	12.9	16.3	17.7	**8.3**

	Change 2000-peak year			
Alternative scenarios	Low population	Low participation	Low productivity[2]	Low interest rate[3]
France	3.7	4.2	n.a.	3.9
Germany	3.4	4.6	4.4	4.3
Italy	2.2	2.3	2.9	1.7
Spain	10.1	9.5	11	8.3

Source: Economic Policy Committee-Ecofin.
[1]Assumed 5 percentage points lower in 2050.
[2]Assumed 0.5 percentage points lower in 2005-50.
[3]Assumed 1 percentage point lower.

Conclusions

32. **The four countries under consideration have made substantial progress towards fiscal consolidation since the mid-1990s, but several challenges and risks remain.** First, public debt remains close to or above the Maastricht reference level of 60 percent of GDP. While the fiscal balance is in the neighborhood of the "close to balance or in surplus" guideline of the SGP, this has been achieved to some extent through tax increases which are now being undone in the context of multiyear tax reduction plans. The strong growth performance of the last two years also contributed substantially to the recent improvement in the fiscal accounts. The combination of tax relief and a growth slowdown may push the goal of fiscal balance further into the future. Thus, additional fiscal consolidation is likely to be necessary in order to remain within the guidelines of the SGP.

33. **With the exception of Spain, the burden of taxation (especially on labor) will remain high relative to other OECD countries even after the programmed tax cuts, while in the medium term, population aging and health care costs are expected to impose a substantial burden on the public sector.** Given these challenges, there is a danger that the same processes that led to large spending and large deficits before 1992 will result in unduly rapid growth of current expenditure, raising the issue of whether a budget close to balance or the desired decline in the tax burden can be achieved.

34. **The deficit and debt ceiling of the Maastricht Treaty and the SGP framework provide a key safeguard against an excessive relaxation of the fiscal stance, and within this framework, the adoption of specific fiscal rules tailored to the needs and preferences of each country could provide additional discipline and accountability.** The next section will explore how such rules may be designed. The issue of how to design rules in decentralized system is also addressed, as this is especially a concern in Germany, Italy, and Spain.

C. Fiscal Rules: Issues and Experiences

35. **Rules constrain policymakers' autonomy in policy decisions.** But what is the justification for limiting discretion in fiscal policy? This question has been addressed by the political economy literature. While recognizing that history, tradition, and preferences—in addition to economic factors—may cause the optimal size of government and public debt to vary across countries, this literature has shown how the political and institutional environment can lead to distortions in the conduct of fiscal policy, resulting in outcomes which may be undesirable from society's point of view (for more details see Chapter I of the Supplementary Information paper).

36. **A number of factors can push policymakers toward running structural budget deficits (Alesina and Perotti, 1995).** Politicians facing the possibility of losing power may discount the future more heavily than private agents, or may be induced to manipulate policy levers to facilitate their re-election. Conflicts among coalition partners may generate a stalemate in the policy decision process, thus delaying pressing fiscal reforms.

37. **Certain features of the political process can also lead to excessive government spending**. For instance, the literature on the so-called "common pool problem" highlights the distortions that can result from certain forms of collective decision-making, in which policy reflects the aggregation of individual decisions. A classic example is elected officials, spending ministers, or parties in a coalition government asking for spending on projects that benefit their constituencies but failing to fully internalize the consequences of the higher taxes needed to finance such decisions. The result is excessively high spending (Weingast, Shepsle and Johansen, 1981).

38. **Fiscal rules have been proposed as a possible device to overcome the distortions described above.** For instance, a deficit bias can be addressed through a legally binding balanced-budget rule. Alternatively, setting an aggregate spending ceiling (an expenditure rule) forces individual spending bids to explicitly take into account aggregate resource constraints, thus reducing the common pool problem.[17] The rest of the section explores in more detail the design of fiscal rules.

Deficit and expenditure rules and targets

39. **Countries committed to a multi-period fiscal framework have typically chosen to anchor fiscal policy on a numerical rule relating to the budget balance, public expenditure, or the public debt (see Chapter II of the Supplementary Information paper).**[18] The rule needs to support, but need not be identical with, the ultimate objective of the policymaker. For instance, an expenditure rule can be designed to safeguard a medium-term target for the budget balance by being consistent with the projected path of revenues.

40. **Perhaps the simplest and most intuitive rule is a balanced budget or, more generally, a rule on the maximum level of the budget deficit.** The rule recently proposed in Spain and the 3 percent deficit threshold of the Maastricht Treaty are examples of rules on the budget balance. Such a rule has the important advantages of being easy to explain to the public and market participants, and to be relatively simple to monitor.[19] One obvious drawback is that it does not address biases towards excessive expenditures, as higher

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[17] Besides rules, the literature has also studied how changes in the budget process and fiscal transparency can improve the conduct of fiscal policy (von Hagen and Harden, 1996, Kopits and Craig, 1998, and Hemming and Kell, 2001).

[18] By a rule is meant a numerical objective that is costly to violate as it is based on a legal obligation or a "reputational investment." Typically, the framework would specify a mechanism to rein in departures from the rule in a particular year. In contrast, a target is an objective that can be missed without triggering any sanction, automatic claw back, or loss of reputation.

[19] Even with a rule on the budget balance, ensuring compliance ex post, i.e. at the budget implementation stage, may not be straightforward. Mechanisms to prevent systematic deviations from the rule ex post need to be devised and implemented.

expenditures can be financed through higher taxes. A second shortcoming is that fiscal policy would become pro-cyclical: as revenues declined and expenditures rose in a recession, a discretionary tightening would be needed to keep the balance in check. In addition, the "activist" fiscal policy needed to abide by this rule might imply a tax policy that varies over the cycle (if the adjustment takes place on the revenue side), a policy that would conflict with principles of optimal taxation. If expenditures have to adjust, on the other hand, efficient medium-term expenditure management may become difficult, or capital expenditures may be excessively squeezed.[20]

41. **Some of the difficulties of a budget balance rule can be remedied by targeting the structural balance.**[21] This rule requires taking a stand on the position of the economy in the cycle and the effects of the cycle on fiscal revenues and expenditures. Different methodologies can be used, and if the government can change the methodology or the parameters from year to year, then the scope for manipulation may be large. To be credible, the rule itself should specify the methodology and parameters of the cyclical adjustment; alternatively, an independent agency could be put in charge of estimating the cyclically-adjusted deficit. In either case, the rule may be difficult to explain to the public and, possibly, if the rule is enshrined in a law, to a court. This would make the rule difficult to monitor and enforce. In addition, the methodology may turn out to be inadequate, especially if there are structural changes in the economy, and failure to revise it would lead to wrong policy decisions.

42. **Instead of focusing only or primarily on a country-specific goal for the balance, some countries have set binding upper bounds on expenditure growth as a key operational focus for policy**. The Netherlands, Finland, and Sweden are examples (see Chapter II of the Supplementary Information paper). This type of framework directly addresses distortions leading to excessive spending and does not automatically lead to a pro-cyclical fiscal stance, because stabilizers on the revenues side are free to operate.[22] This type of rule can also curb the tendency to increase public spending during upturns. In addition, an

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[20] The latter drawback (but not the others) can be avoided by replacing the balance rule with a "golden rule." The golden rule, however, introduces difficulties of its own, because it is often hard to distinguish between current and capital expenditures.

[21] Switzerland is moving in this direction. According to the proposed Swiss rule, in each budget expenditures are set equal to "structural revenues," defined as projected revenues multiplied by the ratio of trend to projected output (Chapter II of the Supplementary Information paper). This is close to targeting a zero structural balance.

[22] The framework could also *mandate* that the stabilizers be allowed to operate by requiring that deviations of revenues from projections be used to reduce or increase the balance. In this case, for the stabilizers to operate correctly, revenue projections must be based on a realistic rather than cautious scenario.

expenditure rule can be easily explained to the general public and market participants, provided that the control aggregate is clear.

43. **One drawback of an expenditure rule is that it does not necessarily correct a tendency towards excessive deficits, for instance through large tax cuts or the systematic over-prediction of revenues.** However, empirical studies suggest that fiscal consolidation based on expenditure reduction tends to be long-lasting (Alesina and Perotti, 1997). In addition, the deficit risk can be overcome by anchoring the framework over the medium term, for example by supplementing the binding expenditure rule with an explicit medium-term "target" for the budget balance, as in Sweden. While a target represents a weaker form of commitment than a binding rule, it may nonetheless ensure enough discipline. Because the target would have to be met only over the cycle, fiscal policy would not need to be pro-cyclical. A slight variant to this approach would be to adopt an explicit target for the stock of debt relative to GDP, arguably a more relevant yardstick for the sustainability of public finances since changes in the stock of public debt often differ from the budget balance. Another approach is that taken by Switzerland, where revenue forecast errors are cumulated into what is referred to as a "notional" debt stock that must be reduced to zero over time (Chapter II of the Supplementary Information paper).

44. **All in all, the advantages of an expenditure rule may overcome its drawbacks in countries—such as the four countries under study—where the tax burden is high and the medium-term level of the deficit is already bounded by the SGP.** To further guard against systematic revenue underperformance or excessive tax cuts, such a rule may be combined with a medium-term stock anchor, such as a target for the public debt-to-GDP ratio. This target should be chosen to achieve the medium-term goals of reducing the tax burden, contributing to address population aging, and ensuring an adequate margin for counter-cyclical fiscal policy. This chapter does not address the question of which targets would be appropriate for each of the four countries studied, but focuses instead on the broad design features of the fiscal framework.

Issues in designing multiyear expenditure rules

The macroeconomic assumptions and the time horizon

45. **Multiyear fiscal plans need to be based on a macroeconomic scenario that projects the evolution of the various expenditure categories and illustrates how they relate to overall economic trends.** In this context, a crucial choice is whether to adopt a realistic or cautious scenario, an issue that also arises in drafting the yearly budget. The advantage of using a cautious scenario is that it is likely to deliver "favorable" surprises ex post, as cyclically-sensitive spending components are likely to turn out lower than projected. Accordingly, each year there will likely be some room within the expenditure ceiling to finance new programs or deal with overruns in non-cyclical expenditure categories. This may

facilitate negotiations within the cabinet and help deal with unexpected spending pressures without violating the framework.[23]

46. **Using a realistic macroeconomic scenario presents distinct advantages. A cautious scenario obfuscates the true fiscal goals of the government, while one of the purposes of multiyear fiscal rules is precisely to make those goals explicit and build consensus around them.** It may also encourage a second-guessing by ministries of the likely scope for additional spending, resulting in unrealistic initial budgets. Furthermore, with an overly cautious scenario the authorities may use the additional room to engage in procyclical policy when the outturn is favorable. With a realistic macroeconomic scenario, a limited margin for new discretionary spending can be introduced in the form of a contingency reserve.[24]

47. **Concerning the time-horizon, a longer horizon means less discretion but also less flexibility**. The length of the legislature (as used in the Netherlands) may be a natural time frame for rules that are self-imposed by a governing coalition, as it acknowledges that such rules would not bind future governments. A four-year rolling horizon, as in the SPs, would also be a sensible choice, provided that each update only introduces a ceiling for the additional year rather than modifying those for previous years. Using multiyear frameworks to constantly push adjustment into the future would, of course, be counterproductive.

Real versus nominal rules

48. **The multiyear framework could specify either the evolution of nominal spending or real spending**. With a real rule, each year the spending ceiling for that year is transformed into a nominal ceiling using the latest inflation forecast.[25] [26] In contrast, with a nominal rule changes in the inflation outlook do not lead to revisions in spending ceilings. Accordingly, a nominal target implies lower real government expenditures in periods of unexpectedly high inflation. If higher inflation results from excessive domestic demand, reducing real

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[23] If cyclically-sensitive items are excluded from the ceiling, however, these advantages would not materialize.

[24] In Sweden, the rate of growth of total spending is set above that implied by the aggregation of the components, thereby creating a margin for adjusting spending in mid-course. In practice, the margin has always been used for discretionary expenditures.

[25] In this respect, a general price index is better than sector-specific deflators, as the latter are probably difficult to forecast accurately, although differences between government expenditure deflators and the general index would lead to ex post deviation from the real spending path. Of course, a nominal rule would not address this problem either.

[26] Differences between actual and expected inflation may result in violations of real expenditure ceilings ex post. To minimize this risk, ceilings can be revised in mid-year to reflect updated inflation projections.

government expenditure would help cyclical stabilization. Similarly, in the case of a permanent adverse supply shock, lower real government expenditure would help absorb the shock and stabilize the expenditure-GDP ratio. By contrast, if the supply shock were temporary, a more appropriate response would be to increase government spending, but the nominal ceiling would force a reduction instead. Thus, a nominal rule may be more appealing in countries where cyclical stabilization is an important concern, temporary supply shocks are unlikely, and automatic stabilizers on the revenue side are small.

49. **The presence of automatic indexation rules on some spending categories may make a real rule more attractive.** For instance, in a number of countries pensions and other entitlements are indexed to expected inflation; thus, a real spending rule would make it easier to set (and respect) the ceiling on entitlement spending.

The choice of the aggregate

50. **In choosing which expenditure aggregate to target, it is desirable to use a comprehensive measure.** A broad aggregate is what is most relevant from a macroeconomic perspective; in addition, a narrow definition of expenditure makes it easy to circumvent the ceiling by introducing new expenditures as items not covered. An aggregate with a clear counterpart in national account statistics would also increase transparency and facilitate monitoring, key elements of a fiscal rule.

51. **Using a comprehensive aggregate, however, has its drawbacks.** For instance, if there is a history of containing spending growth by excessively compressing capital expenditures, as in the United Kingdom, it may be desirable to exclude these expenditures. In this case the framework must also clearly spell out the criteria to separate investment from current expenditures, to limit the scope for arbitrary expenditure re-classifications designed to get around the rule. Interest payments could also be excluded on the grounds that they are not under the direct control of the government; this would not provide opportunities for creative accounting, given that this type of expenditure is easily identifiable.[27] However, to the extent that the main goal of the spending rule is to make sure that small deficits and lower taxes are mutually compatible, capital and interest expenditure should remain in the control aggregate.

52. **Another issue is whether cyclically-sensitive expenditure items (mainly, unemployment compensation) should be included.** While comprehensiveness and ease of monitoring recommend inclusion, it may be undesirable to cut discretionary spending during a downturn to make room for higher unemployment outlays. On the other hand, if changes in unemployment have a strong permanent component, as was the case in the four countries of interest in the last 30 years, then it is necessary to adjust other expenditures permanently rather than let the deficit increase, and excluding this item from the framework would not help achieve this outcome. Table II.8 shows that, while unemployment spending is a small component of total spending in the four countries, when a recession hits the increase in this

[27] In Sweden interest expenditures are excluded while in the Netherlands they are included.

spending item can be non-trivial. In addition, unemployment spending was fairly closely correlated with the cycle in Germany, France, and Italy during 1980-2000, though this was not the case in Spain, where unemployment had a strong structural component. All in all, in spite of the possibility of structural changes in unemployment, it may be preferable to exclude this item from the spending ceiling to increase the ability of the framework to deal with cyclical fluctuations.

Table II.8. Characteristics of Unemployment Spending
(In percent of GDP)

	France	Germany	Italy	Spain
Unemployment spending during 1980-2000:				
Average	1.3	1.6	0.5	2.4
Maximum yearly increase	0.3	0.4	0.2	0.5
Correlation with the output gap	-44.9	-37.2	-47.1	11.2

Source: IMF, WEO database.

53. **Should the expenditure rule cover only discretionary expenditures or also entitlements?** In the four countries under consideration, entitlements are large and growing both because of demographic and economic trends and because there are pressures to create new entitlements and expand existing ones. In addition, it would be relatively easy to disguise new types of expenditures as entitlements. Including entitlements creates problems for enforcement, as automatic cuts in case of overshoots are not feasible, an issue addressed in the next section. All in all, including entitlements is necessary to make the spending rule effective in the four countries.

Compliance and enforcement

54. **When a country chooses to adopt a binding fiscal rule, the inevitable question is how the rule will be implemented and enforced.** Deviations from the rule can occur ex ante, if the yearly budget proposed to Parliament does not conform with the multiyear rule, or ex post, if departures from the rule occur at the budget implementation stage. An effective rule should ensure compliance both ex ante and ex post. [28] [29]

55. **The means of enforcing a fiscal rule ex ante depend on its statutory nature - whether it is a constitutional amendment, organic law, regular law, or simply a political**

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[28] Bohn and Inman (1996) shows that, in U.S. states rules requiring that the budget be balanced are associated with lower deficits only if the requirement has to hold also ex post.

[29] Whereas the SGP framework sets Union-wide fiscal rules, enforced by the Council of Ministers, the expenditure rules and the overall balance/debt targets discussed above would likely be subject to national compliance procedures—although they would doubtless be reflected in countries' SPs and discussed by fellow members of the Union.

commitment. In the last case, violations are legally possible but presumably result in a loss of credibility that may damage the government. A rule sanctioned by ordinary law can be violated if Parliament approves a new law. Also in this case, therefore, a clear political commitment to the framework is necessary to ensure that violations result in a loss of reputation. Constitutional amendments or organic laws are usually more difficult to modify, and thus represent the strongest form of commitment. Because the commitment is so strong, however, budget rules written into constitutions may need to be vague to allow for flexibility to deal with unforeseen circumstances, resulting in less effectiveness. In the case of a spending rule, in which the numerical value of the rule is set every few years, a constitutional amendment is probably not a practical solution, and the rule would have to be entrusted to a political agreement, possibly strengthened by an ordinary law.

56. **Concerning ex post compliance, the rules should specify how ex post deviations will be clawed back in the following years.**[30] This would provide an important anchor to the framework. To minimize deviations, it may be necessary to strengthen budget implementation provisions before introducing the rule.[31] All countries have procedures to ensure that the budget implemented is close to what is approved by Parliament, but these procedures can be more or less restrictive depending on how easy it is to transfer expenditures across different chapters, on whether spending has to be approved by a centralized authority (such as the Ministry of Finance), on the powers of the Minister of Finance to block outlays in case of overruns, on the ease with which the budget law can be amended, and other aspects. In most countries with modern public expenditure management systems, ministers are held accountable at various times in the budget process. Safeguards may include hearings and questioning by the legislature as well as internal and external audits.[32]

57. **Even though rules may not be broken in a legal sense, they may be broken *de facto* if they are not written clearly.** According to Kopits and Symansky (1998), rules should define clearly what is the aggregate to be controlled and what are the escape clauses. Examples of rules that could benefit from greater specificity are a "golden rule" that leaves substantial room for interpretation of investment (as in Germany), or a "cyclically-adjusted"

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[30] In Japan, the "golden rule" has been often violated by using supplementary budgets, as the latter are not subject to the rule. An example of a broadly successful set of rules to ensure budget implementation is the U.S. Budget Enforcement Act of 1990 (see Chapter II of the Supplementary Information paper).

[31] Budget implementation, however, should allow for the deficit to increase if revenues turn out to be smaller due to lower-than-expected growth, consistent with the operation of the automatic stabilizers on the revenue side.

[32] The budget expenditure execution process, including the stages and level of control are discussed in detail in von Hagen and Harden (1994), and Potter and Diamond (1999).

budget balance rule which does not define how to perform the cyclical adjustment.[33] The rule should also be transparent, specifying accounting and reporting standards to limit "creative accounting."[34] Simplicity also enhances the ability of the legislature and the public to detect deviations, making the reputational mechanism more effective. Rules that are too rigid or require measures that are too costly to implement in certain circumstances are likely to be difficult to enforce, as the temptation to circumvent them would be too strong. For instance, the second version of the Gramm-Rudman-Hollings law in the U.S. proved unworkable since it would have entailed drastic cuts in discretionary programs (Chapter II of the Supplementary Information paper). From this perspective, rules that leave some flexibility to accommodate cyclical changes in the fiscal position may be easier to enforce. Additional flexibility can be introduced through contingency funds to be tapped in case of unpredictable events or emergencies, as in the case of the Spanish draft Fiscal Responsibility Law, or by allowing for (some) expenditures to be shifted across budget years (as in the U.K. DEL framework, see Chapter II of the Supplementary Information paper).

58. **A particularly thorny issue, but a relevant one for the four countries of interest, is how to deal with overruns in entitlements.** With discretionary spending, last-minute cuts to bring spending back within budgetary authorizations are always possible, but for entitlements this is neither realistic nor desirable. In this case, a limited contingency fund could cover overruns resulting from overly optimistic cost projections. Once the resources in the fund are exhausted, then discretionary spending would have to be cut or the overrun would have to be clawed back in the following year. On the other hand, the expansion of existing entitlement programs or the introduction of new ones during the budget year should be explicitly forbidden, unless they have been explicitly budgeted for under the spending ceilings.

Implementing a fiscal rules in a decentralized system

59. **The existence of subnational governments with power to decide on important shares of public expenditures and public revenues and accumulate debt may enhance the effectiveness of public spending, but it may also complicate the achievement of national fiscal objectives.**[35] The previous section of this chapter examined spending rule for the general government. Implementing such a rule in a decentralized system is not

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[33] Also, a rule fixing the maximum yearly growth rate of spending rather than its level would complicate verification, as revisions in the outturn for the initial year change realized growth rates. Ceilings on levels also ensure that overruns in one year are automatically clawed back in the next.

[34] On creative accounting and fiscal rules, see Milesi-Ferretti (2000).

[35] Pisauro (2001) argues that the decentralization of revenue and expenditure responsibilities may cause a bias toward higher expenditures and deficits if subnational governments expect to be bailed out by the central government in case of insolvency. In addition, when expenditures are financed through shared taxes, "common pool" problems may arise.

straightforward, and the various possible approaches have their advantages and disadvantages.

60. **Among the countries covered by this study, the issue of subnational governments is particularly relevant in Germany, Italy, and Spain.** In France, the institutional arrangements result in sufficient control on local finances to implement a general government spending rule. In general, enacting fiscal rules in decentralized systems requires a negotiated agreement between the center and subnational governments which, to be effective, would have to be sanctioned by an explicit political commitment or enshrined in law.[36] Such an agreement must also be supported by strong reporting requirements to allow monitoring, namely an effective information system that makes reliable and timely fiscal aggregates available at the subnational level. What should be the content of a pact with subnational authorities?

61. **One option is to negotiate limits on spending by each level of government, effectively parceling out the general government ceiling.** This type of agreement could include a limit on central government expenditure (net of transfers to subnational governments) and another on the expenditure of subnational governments as a whole. Expenditure ceilings could differ for the various levels of government and even within each level of government, depending on spending responsibilities and possibly reflecting different preferences across regions. This framework would allow automatic stabilizers to work at the level of subnational budgets provided that subnationals can borrow to finance deficits during downturns, or that financing from the center (transfers plus shared taxes) is adjusted to compensate for cyclical revenue shortfalls. The agreement could usefully specify rules for dealing with both ex ante and ex post deviations from the ceilings in order to assure compliance.

62. **The drawbacks of this approach are that it may be difficult to reach an agreement on how to apportion the aggregate spending ceiling because there may be a large number of entities involved**. Furthermore, monitoring may be quite complex because subnational governments tend to report with longer lags than the central government and public expenditure management systems are often less well developed at the subnational level.

63. **An alternative option is to negotiate a budget balance requirement for subnational entities.** This type of agreement would probably be simpler to negotiate and monitor than spending limits. If subnationals have little control on the revenue side—as is the case in Germany, Italy, and Spain—a deficit rule might effectively control spending growth over the medium term. However, depending on the formula used to allocate transfers, it could also result in a pro-cyclical fiscal policy at the subnational level. In addition, in years in

[36] This agreement could be called an Internal Stability Pact, although this terminology can be confusing if one understands by it a scheme to implement the SGP. A brief survey of ISPs in euro area countries is in Chapter III of the Supplementary Information paper.

which revenues overperform relative to expectations, subnational government would be able to expand spending, possibly beyond what would be consistent with the general government expenditure rule. To remedy these drawbacks, transfers from the central government (including shared taxes) could be designed to minimize cyclical influences on the revenue side, but this may be complicated and require an overhaul of the whole system of subnational finance.[37]

64. **All in all, in countries where subnational governments have substantial fiscal autonomy, designing and implementing fiscal rules is more complex than in centralized systems.** The main trade off is between a rule that is simple and easy to monitor (a balanced budget rule for subnational governments) and one that avoids pro-cyclicality (a spending rule). The choice has to be made on a country-by-country basis.

D. Fiscal Rules and the Effects of Fiscal Policy on Economic Activity

65. **In this section, the impact of fiscal policy on economic activity under discretion and under rules is investigated.** More specifically, we ask whether fiscal rules imply a change in the behavioral reactions of economic agents to fiscal policy. To what degree can this happen? Private-sector responses will be different if the same fiscal policy action today entails potentially different expectations about the path of fiscal policy in the future. In the discussion, which is conducted at a theoretical level because of data limitations, the focus will be "non-Keynesian" effects of fiscal policy, which depend crucially on expectations about future fiscal policy actions.[38] Three assumptions help highlight the potential differences between a rule-based and a discretionary fiscal regime:

- *Fiscal rules are binding and credible.* The rationale for this assumption is straightforward: if rules are not binding and/or not credible, the difference between a rules-based and a discretionary regime will vanish.

- *Under discretion governments have biases in the direction of higher spending and/or higher deficits*. This assumption ensures that there is a rationale for fiscal rules. In addition, the presence of "biases" under a discretionary regime is one way to ensure that future government behavior, and hence private sector expectations about it, will be different under discretion and under rules.

- *The government's intertemporal budget constraint is always binding.* This third assumption simply ensures that the public internalizes the fact that the government

[37] Transfers could be determined as a function of trend output or trend tax revenues, or of parameters such as population. In order to avoid procyclical offsets at the central level, transfers would be excluded from the expenditure aggregate targeted.

[38] Traditional Keynesian effects, such as the expansionary effect of higher government spending and lower taxes on liquidity-constrained individuals when output is demand-determined, would not be systematically different under the two regimes.

has eventually to repay its debts. Under discretion and in the presence of a deficit bias this will occur later rather than sooner, but it will eventually occur.

66. **Two types of fiscal rules will be considered: a rule on the cyclically adjusted budget balance; and an expenditure rule.**[39] We shall focus first on temporary tax and spending "shocks" and subsequently on announced permanent changes in policy. The analysis is mainly concerned with the impact of fiscal policy on aggregate demand in a small open economy.[40] [41] Fiscal rules may have additional effects related to their impact on uncertainty. For example, binding limits on fiscal imbalances will reduce, *ceteris paribus*, the likelihood of higher future taxes, with positive effects on capital accumulation.[42] Investment may also be positively affected by the reduction in the *volatility* of fiscal policy that rules may entail.

67. **The results of the analysis, presented in more detail in Chapter IV of the Supplementary Information paper, can be summarized as follows.** Announcements of permanent changes in fiscal policy may be more credible if they are supported by rules; this would make private agents more likely to respond to a spending cut or a tax cut by raising their private consumption, as they anticipate a reduction in their future tax burden. By contrast, under discretion private agents may think that reductions in spending will only be

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[39] If a strict balanced budget rule is in place, any spending shock must be matched by an immediate decline in other expenditures and/or by an increase in taxes, and hence it is not very meaningful to talk about the effectiveness of fiscal policy in such a context. The only exception would be the case in which for exogenous reasons, say, revenue is higher than forecast and so there is room for increased public spending. In this case, the assessment of how expansionary the policy would be clearly depends on whether the revenue shock is perceived as temporary or permanent and as leading to lower future taxes or higher future spending.

[40] Allowing for an impact of fiscal policy on the supply side, for example through the labor supply decision, would introduce considerable complications. On the one hand, an increase in government spending would reduce the resources available to the private sector for consumption, and hence stimulate labor supply (the income effect). On the other hand, the increase in distortionary taxes needed to finance the additional government expenditure would reduce labor supply (the substitution effect). Hence the overall impact on labor supply would be ambiguous. Clearly, changes in capital income taxes would have output effects through their impact on rates of return (making tax cuts more expansionary and tax increases more contractionary).

[41] The hypothesis of a small open economy pins down the domestic interest rate irrespectively of fiscal policy shocks. See Barro (1989) for an analysis of temporary and permanent shocks to government purchases in a closed economy.

[42] In endogenous growth models higher tax rates on labor and/or capital income reduce the rate of return and the rate of growth.

temporary (given the assumed spending bias of the government), and therefore would raise their private consumption less in response to both tax and spending cuts. Accordingly, a permanent spending cut may be less contractionary and a permanent tax cuts may be more expansionary under rules than under discretion.

68. **For the case of temporary fiscal shocks, the key issues are whether the shock is going to be offset by changes in taxes or in expenditure, and whether this offset is going to take place "sooner" or "later."** In general, under rules deviations of fiscal policy from its announced path may be expected to be reversed sooner rather than later, which would imply weaker effects of tax reductions on aggregate demand. The private sector response to a spending increase may instead differ between the case of a spending rule (making it likely that the offset is going to occur through lower future spending) or a deficit rule (the offset could occur with an increase in future taxes, much like in the case of discretion). Aggregate demand would then rise by more under a spending rule, because agents anticipate that the increase in public absorption is temporary.

69. **To summarize, once fiscal rules are in place, are understood by the public, and have become credible, the impact of fiscal policy changes on aggregate demand may differ relative to a framework of discretion, because rules may change the public's perception of how future fiscal policy will evolve.** For example, with a spending rule a discretionary tax cut is likely to be more expansionary than under discretion if permanent but less so if temporary. A permanent spending cut, on the other hand, may be less contractionary, while a temporary spending increase is likely to be more expansionary. Of course, while the theory suggests that these might be the effects, whether they are large enough for policymakers to take them into account in practice is an empirical matter.

E. Conclusions

70. **This chapter has reviewed fiscal policy and the fiscal framework in the four largest countries of the euro area, France, Germany, Italy, and Spain**. As in many other advanced economies, in these countries the size of government and the public debt grew rapidly since the 1970s. Furthermore, fiscal policy was often conducted in a pro-cyclical fashion. With the prospect of monetary union in the late 1990s, large deficits needed to be reined in. The Maastricht Treaty imposed well-defined rules on deficits and debt levels, which the four countries managed to meet after an often difficult consolidation process. Despite this progress, significant pressures on expenditures in the medium run remain, with debt still large (especially in Italy), tax burdens heavy (less so in Spain), infrastructure needs (particularly in Spain) and population aging ahead (relatively soon in France). These challenges motivate the re-examination of the fiscal framework in the four countries conducted in this chapter.

71. **This chapter has argued that adopting carefully designed multiyear fiscal rules may help consolidate fiscal discipline in the four countries, reducing deficit and spending biases (as underscored by the new political economy literature) and possibly reducing the pro-cyclical character of fiscal policy.** A framework encompassing a country-specific medium-term deficit or debt target (within the boundaries of the Maastricht Treaty

and the SGP) and a spending rule is found to be preferable to one based on a budget balance rule, as is does not require discretionary measures to offset cyclical fluctuations in revenues. Provided that the spending aggregate used in the rule is appropriately defined, such a framework can be relatively easy to explain to the public, in contrast with one based on a cyclically-adjusted budget balance.

72. **For the framework to work, care must be taken to ensure compliance both *ex ante* (at the stage of the introduction of the yearly budget) and *ex post* (at the budget implementation stage).** The former requires a clear political or legal commitment to the multiyear framework, precise definition of the rule, and accounting and reporting standards that limit "creative accounting." The latter may require changing budget institutions to strengthen implementation. Margins of flexibility to deal with unpredictable circumstances are also useful to ensure compliance.

73. **A successful fiscal framework should apply to the general government because this is the relevant economic concept and because shifting expenditure responsibilities to other levels of government could be used to circumvent the rules.** Thus, the framework should address the issue of coordination among different level of government. When subnational governments have considerable fiscal autonomy, fiscal rules may have to be complemented by an intergovernmental agreement. Such a pact would specify either a spending rule or a deficit rule on subnational governments, monitoring responsibilities, and sanctions for noncompliance.

74. **Finally, when countries conduct fiscal policy in a well-established and credible rules-based framework, the economic impact of discretionary fiscal policy measures may change compared to a framework characterized by discretion.** This is because agents' expectations on how the measure will affect future fiscal policy are likely to depend on the rule, and these expectations affect behavior. This chapter has provided a summary analysis of this important issue, but additional research, both theoretical and empirical, is needed.

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III. Job-Rich Growth in Europe[43]

A. Introduction

75. **After years of relatively lackluster performance, employment in the larger euro-area countries accelerated** in the second half of the 1990s. This paper examines the facts of employment generation in France, Germany, Italy and Spain, in an attempt to answer two questions: first, is the behavior of employment during the last economic upswing markedly different from that in previous expansions? Second, if so, what factors could explain this improved performance? The results of the analysis suggest that output growth has been significantly more employment intensive of late than during previous growth episodes, although in Germany almost all of the employment increase in the 1990s was in part-time jobs. This increased job-intensity of growth may largely be due to substantial reductions in labor costs. The bulk of the decline in labor costs reflects increased wage moderation on the part of employees. A stabilization and, in a few cases, reduction in nonwage components of labor costs, notably employer social security contributions, has also played a role, but only recently. A decline in replacement rates for unemployment benefits in some of the countries reviewed has also helped. A loosening of labor market regulation may have catalyzed the response of employment to wage moderation in some countries, while in others employment responded despite tighter regulations. The use of active labor market policies probably played only a modest role.

76. **The analysis also suggests that while labor cost moderation has occurred on a national level—at least in France, Italy and Spain—there is little evidence that this moderation has been more pronounced in regions that have suffered from relatively high rates of unemployment.** This finding may have negative implications for future employment growth and for equilibrium unemployment, as it raises concerns that job growth may run up against supply constraints well before full employment is achieved at the national level.

77. The paper is organized as follows. Section B reviews historical trends of employment, labor supply and unemployment, and presents some evidence that the employment intensity of output growth has increased recently. To this end, it employs a simple econometric test for a structural break in employment growth, which confirms that the elasticity of employment growth with respect to output growth was indeed significantly different in the 1990s from its value in previous decades in France, Italy and Spain but, when measured in full-time units of labor, not in Germany. Section C analyzes the sources of this increased employment intensity, distinguishing between changes in labor demand and labor supply, and focusing particularly on labor market deregulation and active labor market policies in promoting employment growth. Section D looks beyond wage moderation and the role of wage dispersion, Section E concludes.

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B. Employment Growth in the 1990s From an Historical Perspective

78. **Data on total employment and output growth confirm that in the larger euro-area countries, the expansion of the late 1990s has been significantly more employment intensive than were previous growth episodes.** Specifically, the ratio of employment growth to output growth is substantially above the historical norm in all four major euro-area countries (Table III.1). Growth has been especially employment intensive in Spain, where the rate of employment growth has been close to that of output growth, but in all four countries the ratio of employment growth to output growth has been much larger recently than in previous expansions, averaging 0.6 in the late 1990s. This is three times the average achieved in all expansions from the early 1970s to the mid-1990s.

79. **The increase of employment intensity reflects developments in the business sector, as public sector employment acted as a drag on employment growth in all four countries.** Public employment grew more slowly than business sector employment in France and Spain, and contracted in Germany and Italy during the expansion of the late 1990s. The ratio of business sector employment to output growth averaged 0.6 in the late 1990s, compared to barely 0.2, on average, during previous expansions (Table III.1).

80. **Although part-time and temporary employment have both increased during the current upswing, employment on a full-time equivalent basis has also risen rapidly, except in Germany.** Indeed, once employment is measured in full-time equivalent units, the recent expansion is no longer particularly job-rich in Germany (Table III.1), as part-time jobs accounted for much of the recent growth of employment there. In addition, while fixed-term or temporary contracts are used in all countries, only in Spain do they constitute a substantial share of total employment (Figure III.1). Total hours of work grew less than employment in the 1990s because of the downward trend in average hours of work. However, when compared to the recovery at the end of the 1980s, both hours of work and employment have increased at a stronger pace in the last four years, even though average GDP growth for the four countries was stronger in the earlier period. In France, the strength in hours of work, even after the implementation since 1996 of different laws aiming at the reduction of the standard workweek, is remarkable.[44]

81. **The services sector has been the main engine of employment generation in the 1990s, consistent with trends in output growth and with the relatively labor-intensive nature of many service sector jobs** (Table III.2). Thus, part of Germany's relatively lackluster employment growth performance in the late 1990s, at least when measured on a full-time equivalent basis, can be explained by slow growth in its services sector, where gains

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[44] In fact, Passeron (2000) presents evidence of the positive effect on employment growth from the 35-hour workweek laws enacted in 1996 and 1998 in France. Employment growth in France was also very strong in 2000, right after the introduction of a third law enforcing the 35-hour workweek in firms employing more than 20 individuals.

were confined to the financial sector and enterprise services. In addition, Germany made less headway than the other countries even when excluding eastern Germany, the construction sector, or the government sector. It does, however, still record the highest labor force participation rate and lowest unemployment rate among the countries reviewed (Figure III.2).

82. **Rapid growth in employment has been accompanied by both significant declines in unemployment rates and increases in labor force participation.** The unemployment rate has fallen most dramatically in Spain, from 23.7 percent in 1994 to 14.1 percent in 2000 (Figure III.2). However, declines in France and Germany were also significant: the rate of unemployment in France dropped from 12.2 percent in 1997 to 9.7 percent in 2000, while that in Germany fell from 9.5 percent to 7.8 percent over the same period. In Italy, progress has been more recent and, to date, less pronounced, with the rate of unemployment falling to 10.7 percent from a recent high of 11.9 percent in 1998. Labor force participation has risen considerably in Spain and Italy and more gradually in France (Figure III.2). In Germany, the participation rate had already increased steadily through the 1980s and jumped at the turn of the decade, largely, but not only, because of the incorporation in the data of eastern Germany where the participation rate of women is relatively high.

83. **Recent declines in unemployment rates have done little to redress longstanding imbalances across demographic groups.** Data on unemployment rates for women and the young show little evidence of convergence in recent years (Figure III.3). Only in Germany did the ratio of female to male unemployment rates decline noticeably since 1995, and in Spain the ratio has worsened considerably. Progress in addressing youth unemployment has been similarly slow since 1995, although all four countries have made progress relative to the early 1980s. Only in Germany does unemployment appear not to have an important gender or age component: in the remaining countries, female and youth unemployment rates substantially exceed those for male and older workers.

84. **The benefits of declines in unemployment rates have also been distributed unevenly across regions in most countries.** Since the mid-1990s, the dispersion of regional unemployment rates (measured by the coefficient of variation of regional unemployment rates) has widened everywhere but in western Germany (Figure III.3).[45] These regional disparities are particularly acute in Italy, and have worsened notably both there and in Spain. They have also plagued Germany since reunification.

85. **The impressionistic findings on the relationship between employment and output growth discussed above can be analyzed and expressed more formally in a simple econometric exercise.** For each country (for Germany, only the western part), the following regression was run over 1973-2000 (for France, only 1981-2000) to investigate the connection between employment and output:

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[45] The coefficient of variation is defined as the standard error divided by the mean of regional unemployment rates defined according to EUROSTATS' NUTS level I.

$$dl_t = \beta_0 + \beta_1 dy_t + \beta_2 dy_{t-1} + \beta_3 D_{90} dy_t + \beta_4 D_{90} dy_{t-1} + \beta_5 dn_{t-1} + \beta_6 dn_{t-2} + \varepsilon_t$$

where d denotes the difference operator, and l and y the natural logarithms of aggregate employment and real GDP, respectively. The variable D_{90} is a dummy with D_{90}=1 for 1990 and subsequent years and D_{90}=0 otherwise.[46] Accordingly, an estimate for β_3 significantly different from zero suggests that the contemporaneous relation between employment and output differed significantly in the 1990s relative to earlier decades. The year 1990 was chosen as a break-point to obtain a reasonably long span over which to check for a change in the employment-output relation: alternatives would have been to identify a full cycle for each country or to concentrate on periods of cyclical expansions. But this would have introduced more judgment in the analysis and added little value to the exercise. Employment is expressed in full-time equivalent units, so as to adjust for changes in the share of part-time work. Furthermore, all variables are expressed in first differences: thus the equation captures the short-run relation between output and employment.

86. **The econometric evidence suggests that growth has become more employment intensive during the 1990s in all countries but Germany.**[47] The table below shows the regression output: the standard test statistics suggest a good fit and reasonable error properties. As can be seen from the estimates for β_1—which are all significant at a 5 percent level—a one percentage point increase in real GDP is associated with a contemporaneous (short run) rise in employment of between 0.39 percentage point (Italy) and 0.63 percentage point (Spain). However, the estimates for β_3 suggest that during the 1990s the increase in employment arising from a one percentage point increase in real GDP is significantly larger in France, Italy, and Spain: the difference relative to the 1970s and 1980s amounts to between 0.15 percentage point (France) and 0.49 percentage point (Spain).[48] By contrast, the

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[46] An intercept dummy was introduced as well but turned out insignificant in all countries except Italy. For Italy, the intercept dummy suggests that employment growth was 1.3 percent lower during the 1990s upon holding constant current and lagged output growth and lagged employment growth. The slope dummy then indicates that a one percentage point increase in output was associated with an additional 0.68 percent employment growth during the 1990s. Since these estimations serve only descriptive purposes, not to provide a structural interpretation of the employment intensity of growth during the 1990s, only the results without the intercept dummy are reported.

[47] If number of employees, instead of full-time equivalent units, are used to estimate the above equation, all countries, including Germany, show an increased sensitivity of employment to output growth in the 1990s.

[48] Even though the result for Spain is highly significant, the relatively early onset of strong wage restraint, along with labor market deregulation in the mid-1980s, suggests that the structural break might have occurred prior to 1990.

estimates for β_3 for western Germany are both small and wholly insignificant, suggesting no change in the employment-output relation.

87. **Moreover, in Germany growth during the 1990s was less labor intensive than in any of the other countries**. The sum of the estimates for β_1 and β_3 suggests that output growth in western Germany during the 1990s was less employment intensive than in any of the other countries (when measured in full-time equivalent units), by a margin of 30 percent (relative to France, which had the least employment intensive growth of the other three countries). To check for statistical significance, the regressions for France, Italy, and Spain were run by restricting the estimates for β_1 and β_3 to the values obtained for Germany. Wald tests reject the restrictions at the 5 percent significance level for all countries.

Regression of Employment on Real GDP Growth 1/

	β_1		β_2	β_3		β_4	β_5		β_6		R^2	DW
France	0.57	*	0.14	0.15	**	0.12	0.07		-0.12		0.93	2.33
	(0.08)		(0.16)	(0.08)		(0.09)	(0.25)		(0.11)			
Italy	0.39	*	0.06	0.39	*	-0.04	0.47	*	0.13		0.73	1.75
	(0.06)		(0.10)	(0.15)		(0.19)	(0.21)		(0.19)			
Spain	0.63	*	0.01	0.49	*	-0.06	0.31		-0.08		0.78	2.23
	(0.19)		(0.20)	(0.25)		(0.26)	(0.21)		(0.16)			
Germany, western	0.52	*	-0.07	-0.01		0.01	0.8	*	-0.23	**	0.91	2.38
	(0.06)		(0.11)	(0.08)		(0.08)	(0.19)		(0.13)			

Sources: OECD; national authorities; and IMF staff calculations.

1/ Employment measured in full-time equivalent units.

Note: Standard errors in parentheses. A * indicates significance at a 5 percent level; a ** indicates significance at a 10 percent level.

88. **The flip-side of the increased elasticity of labor input to changes in output in these countries was a decline in labor productivity growth in the 1990s.** It is important to remark, though, that increased employment growth does not need to be associated with a deceleration in labor productivity: employment growth was strong in the United States in the 1990s when labor productivity also kept a healthy pace. In addition, labor productivity growth has been declining in Europe for decades although until the recent episode employment growth had been quite sluggish (Table III.3). Labor productivity can be decomposed into two components: capital deepening and total factor productivity (TFP) growth. Both have been responsible for the deceleration in productivity since the 1970s. During the latest recovery period, capital deepening was quite weak in all countries and, actually, significantly lower than in the 1980s; a sign of the employment-based growth of late. TFP growth during the latest recovery was also significantly weaker than in the 1980s, although only moderately so in the case of France. Workplace reorganizations following the

introduction of the standard workweek reduction laws in France since 1996 may have supported TFP growth.[49]

89. **In summary, the data confirm that output growth has been more employment intensive during the current expansion than in previous ones.** The increased job-intensity of growth has been accompanied by a decline in labor productivity growth. Such a decline originated from reductions in capital deepening and TFP growth in all countries with the exception of France where TFP growth has actually gone up in the last few years. The increase in employment intensity has led to a significant decline in overall unemployment rates, but there is little evidence that unemployment rates are converging among demographic groups or across regions, which could suggest that wage dispersion remains insufficient. Maintaining rapid rates of employment growth, however, will increasingly require the entry into employment of individuals with relatively low initial productivity, a process that thus far appears to be inconsistent with present levels of wage dispersion.

C. Explaining the Pick-Up of Employment Growth

90. **Understanding the factors responsible for more rapid employment growth in recent years requires disentangling changes in labor supply conditions from changes in labor demand.** This section provides a framework for doing this. It argues that changes on the supply side of the labor market were primarily responsible for favorable employment developments of late. That is, a behavioral change has taken place on the part of workers and their representatives who appear to have been attaching more importance to the employment consequences of negotiated wage settlements than in the past. This phenomenon is referred to as wage moderation. Labor demand conditions also appear to have supported stronger employment growth but in a more passive way through a slowdown in the pace at which firms have been adopting labor-saving technology.

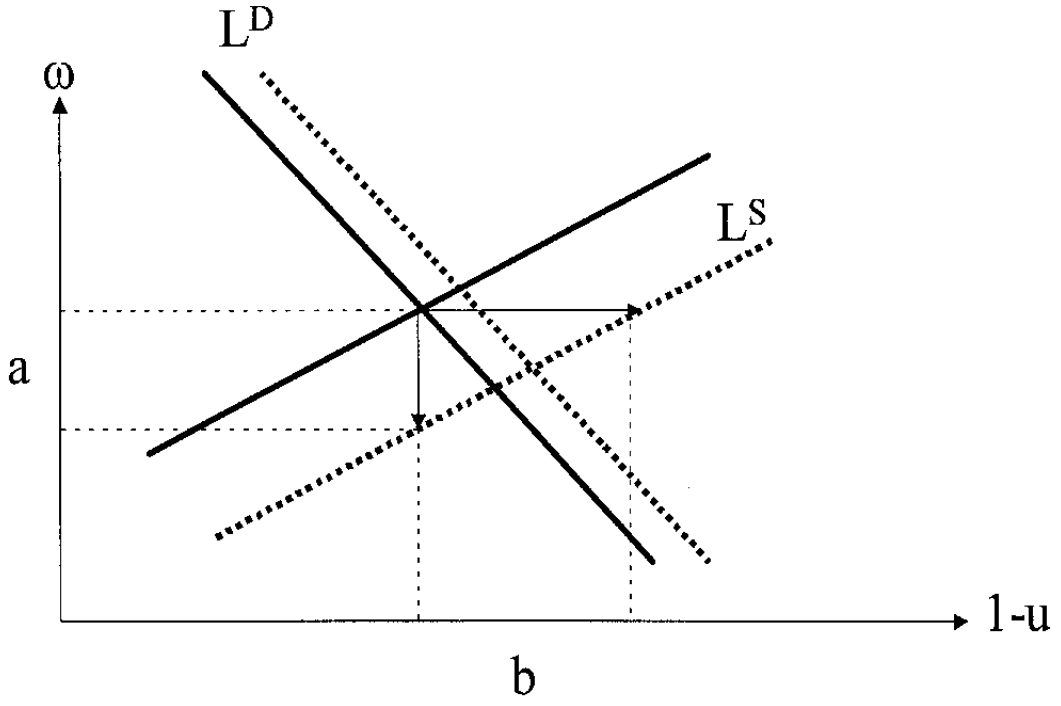
91. **Employment growth driven by wage moderation fits well with the phenomenon of job-rich growth.** As workers moderate their wage demands, firms have less reason for adopting labor-saving technology. As a consequence, output per worker grows less rapidly and the inverse, job-intensity, accelerates. Slower productivity growth would also be consistent with a change in the skill-mix of employment to the extent that new jobs would be filled by previously unemployed workers, which are disproportionately unskilled.

The analytical framework

92. **In a partial equilibrium setting, employment and wages are determined by the intersection of a labor demand curve and a wage curve.** The latter captures the wage setting behavior of workers or their representatives and substitutes. The intersection typically does not involve market clearing defined as zero unemployment or unemployment reduced to its frictional level. It does constitute an equilibrium, however, in the sense that market forces

[49] See Passeron (2000) and Lerais (2001).

will drive employment and wages to the values determined by the intersection. In this framework, observed changes in employment and wages reflect movements of the intersecting point as labor demand and the wage curve shift over time. In turn, the position of the labor demand and wage curve is determined by technological, behavioral, and institutional parameters. The relationship between wage and employment movements would not be expected to be systematic. For example, a shift in the labor demand curve would move employment and wages in the same direction, but a shift in the wage curve would move them in opposite directions (see diagram below).[50] In practice, both curves might shift at the same time with the outcome for wages and employment depending on the direction and size of the shifts and the slope of the two curves.



93. **The labor demand curve is downward sloping under the standard assumptions of profit maximizing firms and a production technology where the additional output produced per unit of labor shrinks with expanding employment.** A simple CES production function (equation (1)) provides a sufficiently rich analytical structure to illustrate the main factors that might be expected to shift labor demand:

[50] In the diagram, wages (ω) are corrected for both price and productivity levels. Employment (x – axis) is normalized by the size of the labor force and is equivalent to one minus the unemployment rate (u).

$$Y_t = [\alpha(a_t L_t)^{\frac{\sigma-1}{\sigma}} + (1-\alpha)K_t^{\frac{\sigma-1}{\sigma}}]^{\frac{\sigma}{\sigma-1}}, \qquad (1)$$

with Y standing for output, L for labor, K for capital, σ for the elasticity of substitution between effective labor (aL) and capital, and a technology parameter α between 0 and 1. Smaller values of α are associated with more capital-intensive modes of production. Equating the marginal product of labor to real effective compensation, i.e., real effective product wage plus employers' social security contributions at the rate t^e, to maximize profits, yields after rearranging and some approximation the following relationship:

$$\log\alpha - t^e = \log(\omega_t) + \frac{1}{\sigma}\log(\frac{a_t L_t}{Y_t}). \qquad (2)$$

In order to satisfy equation (2), employment must fall as real effective wages rise, which establishes that the labor demand curve is downward sloping. Equation (2) also shows that the technology parameter α and employers' social security contributions shift the labor demand curve: for higher α (i.e., less capital-intensive production), or lower t^e, a given real effective wage is associated with more employment, meaning that the labor demand curve shifts out.

94. **The supply side of the labor market is modeled by a wage curve that tries to capture how wages are determined in negotiations between employers' and workers' associations.** It assumes that workers' associations negotiate wages knowing that hiring decisions rest with employers and are based on profit considerations (Box III.1). Unemployment has a dampening effect on wage demands because it raises the probability of long spells of joblessness and hence the associated risks and costs to workers. This establishes the upward sloping shape of the wage curve.

95. **The wage curve is subject to a variety of shift parameters that capture workers' preferences and institutional arrangements, in particular unemployment benefits and labor taxes.** As in the case of labor demand, the position of the wage curve changes as the underlying behavioral and institutional factors change. Key shift parameters are workers' preferences for employment, as opposed to merely earnings, captured by the parameter γ, the level of unemployment benefits, B, and labor taxation, C. For example, if the value attached to employment increases, wage demands moderate and the wage curve shifts out. Likewise, the level of unemployment benefits matters as it is critical for workers' well-being during spells of unemployment: lower benefits make unemployment more unpleasant, thus dampening wage demands and shifting the wage curve outward. Finally, the taxation of labor relative to the taxation of income when unemployed influences the position of the wage curve. Lowering the taxation of wages, but not of income when unemployed, increases the net income loss during unemployment spells, thus reducing wage demands and shifting the wage curve out.

Box III.1. Deriving the Wage Curve

The wage curve seeks to model the relation between wages and unemployment as the outcome of wage bargaining between employers and employees. Unlike in a setting with a conventional labor supply curve, workers cannot costlessly switch between jobs nor are they costlessly and instantaneously replaceable by other workers. In a depressed labor market, where it is hard to find alternative employment, workers will therefore settle for lower wages than in a booming labor market where jobs are easy to find. When bargaining is about wages, and hiring decisions rest with employers, the outcome is the solution to the maximization problem

$$\underset{W_i}{Max}\,\Omega_i = \left[L_i^{\gamma}\left(\frac{W_i}{C} - A\right)\right]^{\theta} \Pi_i \qquad \text{s.t. } L_i = L(W_i), \text{ from firm's profit maximization.} \tag{3}$$

L_i, W_i, and Π_i represent, respectively, employment, wage, and profits of firm i. θ measures workers' relative bargaining power and γ indicates how much workers care about aggregate employment. C is the consumer price index, P_C, adjusted for the tax wedge between earned wages and workers' purchasing power. Defining t^c as the consumption tax rate, t^d as the income tax rate, and t^{ss} as the social security tax rate, C can be written as

$$C = P_C\left[\frac{1+t^c}{(1-t^d)(1-t^{ss})}\right] \tag{4}$$

A represents workers' reservation wage and equals

$$A = (1-u)\frac{W}{C} + u\frac{B}{C_U}. \tag{5}$$

u, W, B, and C_U denote the unemployment rate, wages, the income received if unemployed, and the consumer price index adjusted for the tax wedge applicable to the income of the unemployed. The unemployment rate is a proxy for the probability of finding work elsewhere in case wage negotiations fail.

Solving the maximization problem (5) yields

$$\frac{W_i}{C} = mA \ , \ m > 1. \tag{6}$$

Negotiated wages, corrected for the tax wedge, turn out to be marked-up alternative income of workers. The markup factor is increasing in workers' bargaining power. It is decreasing in the elasticity of labor and output demand, the labor intensity of production, and the value workers attach to employment as such.

Finally, assuming symmetry across workers and replacing A yields the wage curve

$$W = \frac{mu}{1-m(1-u)} B\frac{C}{C_U}. \tag{7}$$

It has four important features: (i) the wage level is inversely related to the unemployment rate; (ii) negotiated wages are higher when the level of income received during unemployment spells is higher; (iii) the tax wedge matters for wages only to the extent that it affects wage income and the income of the unemployed differently; and (iv) changes of workers' preferences, technology and product market conditions alter the relationship between wages and the unemployment rate and are thus shift parameters of the curve.

96. **Note that in the model, labor productivity increases are assumed to be passed through one-for-one into wage demands.** Deviations from this behavioral benchmark consequently constitute changes of employees' preferences. In other words, workers not seeking full compensation for productivity gains would be viewed as placing a greater emphasis on securing jobs for the unemployed. In the simple supply and demand diagram above, the wage curve is strictly drawn as a function of real effective product wages meaning that wages growing in line with labor productivity do not shift the curve and thus do not affect equilibrium unemployment. At least in the long run this is a reasonable assumption well covered by empirical evidence.[51]

Real effective wage trends

97. **Real effective wages in the four countries increased substantially in the 1970s but since the early 1980s have been on a declining trend that was temporarily interrupted in the early 1990s, most severely in Germany** (Figure III.4).[52] The decline of real effective wages, which was most dramatic in Spain and in Italy, left them below their 1970-levels in all countries except for Germany. Data on real contractual wage growth, unadjusted for productivity growth, also show a substantial slowdown in the 1990s and confirm the relative country experience (Figure III.5).[53] In Germany the declining trend of real effective wages set in a little later than in the other countries and was somewhat less pronounced. It was also most severely interrupted around 1990 as a consequence of reunification. For one thing, eastern Germany joining the statistical base at wages out of line with productivity in 1991

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[51] Blanchard and Katz (1992), Decressin and Fatás (1995), and Mauro et al. (1998) provide evidence for stable, region-specific equilibrium unemployment, region-specific rates of labor productivity growth notwithstanding. In the formal model sketched in Box III.1, real wage demands, W, grow one-for-one with productivity if income of the unemployed, B, is linear in labor productivity. The latter is likely to be the case, as unemployment benefits are typically explicitly or implicitly linked to the prevailing wage level.

[52] To derive real effective wages, the nominal gross hourly wage (i.e., wage costs minus employers' social security contributions) is deflated by the GDP deflator and the index of labor augmenting technical progress. The growth rate of the latter can be estimated as TFP growth divided by the labor share of income. Real unit labor costs are a rough approximation of real effective product wages. The estimates refer to the business sector, rather than the whole economy, and are calculated from the Analytical Database of the OECD and unpublished OECD data on average hours worked. Real effective wages per worker exhibit a similar pattern and, in particular, show the same ranking of countries. Data for Germany refer to western Germany until 1990 and united Germany thereafter.

[53] Calculated from national data on nominal wage increases stipulated in collective bargaining agreements and deflated by the consumer price index.

pushed up real effective wages. And in the ensuing years wage increases in eastern Germany were driven primarily by the desire to converge to western earnings levels rather than by productivity considerations. However, the reunification boom also triggered rapid wage growth in western Germany. Indeed, since 1992 real unit labor costs have increased faster in western Germany than in eastern Germany.

98. **The simultaneous decline of real effective wages and the unemployment rate in the second half of the 1990s suggests that developments were dominated by an outward shift of the wage curve.** With the labor force expanding in this period, only an outward shift of the wage curve can produce declining wages coupled with falling unemployment as long as the labor supply curve is downward sloping and the wage curve is upward sloping. This is not to say that the labor demand curve must have remained unchanged; it might have also shifted out, but the effect of the wage curve shift must have dominated for otherwise real effective wages would not have fallen.

Shifts in labor demand

99. **Pronounced swings of the share of wage income in national income over the last three decades suggest that the labor demand curve has moved around significantly, although it has perhaps been more stable in the 1990s.** The right-hand side of equation (2) is approximately equal to the share of wage income, at least as long as σ is close to 1. Therefore, changes of the wage share in national income over time indicate that the technology parameter, α, and/or employers' social security contributions must have changed over time. The wage share increased in the 1970s, declined in the 1980s, and stabilized in the 1990s, especially in the second half of the decade (Figure III.6). Over the 30-year period, the wage share has declined substantially in all countries and by as much as 30 percent in Spain. The stability of the wage share in the second half of the 1990s suggests that the position of the labor demand curve has been more stable recently so that observed changes of real effective wages have been likely driven by shifts of the wage curve.

100. **Both technology changes and rising social security contributions by employers contributed to the declining share of wage income.** Technology changes are traced by the *labor* share of income, i.e., the share of wages plus employers' social security contributions in national income.[54] Like the wage share, the labor share also fell quite strongly over the last three decades, but not as much (Figure III.6). It declined most in Spain (by about 12 percent) and least in Germany (by about 6 percent). The excess drop of the wage share is due to rising social security contributions of employers. On average, about two thirds of the decline in labor share in can be attributed to technology factors and the remainder to increases in social

[54] To see this, rearrange equation (2) by moving t^e to the right-hand side. This isolates the technology parameter α on the left-hand side and the right-hand side approximates the labor share of income for σ reasonably close to 1.

security contributions. In recent times, however, employers' social security contributions have been reduced in France (after 1993) as well as in Italy and Spain (after 1996).

101. **Observed technology changes likely reflect the adoption of increasingly capital-intensive technologies, not least in response to rising wage costs in the 1970s and early 1980s.** In the face of rising labor costs and limited substitutability between capital and labor in the short run the labor share of income initially rose. It declined again as more capital-intensive modes of production were adopted over the medium term, as reflected in the rising capital-output ratio during the 1970s and 1980s (Figure III.6). The stabilization of labor shares and the capital-output ratio in the second half of the 1990s suggests that this process is now petering out.

Shifts in the wage curve

102. **This section examines more closely the prima facie evidence that an outward shift of the wage curve is responsible for recent job-rich growth.** It first tries to quantify the extent to which wage demands have moderated and how this might have affected employment and the NAIRU. It then looks at the factors that could have curbed wage demand.

103. **In order to isolate shifts in the wage curve, changes in wages need to be adjusted for inflation and productivity growth and the effects of unemployment on wage demands**. The latter is key: observed changes in wages might be nothing but a response to developments in unemployment without any change of workers' underlying stance at the negotiation table—i.e., a movement along the wage curve. Making the adjustment requires an estimate of the slope of the wage curve assuming, as argued above, the 1990s were a period of relatively stable labor demand conditions. In turn, the slope of the wage curve—or relatedly, the elasticity of wage costs (δ_1) with respect to unemployment—can be estimated by using a simplified model based on equation (7) of Box III.1.

$$\omega = \delta_0 + \delta_1 u \tag{8}$$

$$where\ \delta_0 = \delta_0(u^*, m, C, C_u), \delta_1 = \delta_1(u^*, m, C, C_u)$$

Staff estimates (see Appendix) put this elasticity at -0.2, somewhat higher than estimates elsewhere in the literature, although not sufficiently different to alter the conclusions qualitatively.

104. **The quantification of δ_1 enables wages to be adjusted for unemployment rates, to derive a better measure of underlying wage demands (Figure III.7).** As can be seen, unemployment-adjusted real effective wages rose sharply during 1975-85, most of all in Germany and least of all in Italy. Since the mid-1980s, however, they declined in all countries but Germany, where the events surrounding reunification pushed up wage demands.

105. **Information on the slope of the wage curve can also be used to calculate changes in the NAIRU.** The vertical shift of the wage curve can be computed from the slope of the wage curve and observed unemployment-wage combinations. In the medium run this shift should be proportional to the change in the NAIRU or natural rate of unemployment. This is because over longer periods of time—that is, periods over which firms can adjust all factors of production including capital—labor demand should be independent of unemployment. In other words, the labor demand curve would be horizontal and equilibrium unemployment changes by as much as the wage curve shifts.[55]

106. **In all countries, the calculated NAIRU reached high levels in the mid-1980s and then declined.** Figure III.7 traces the NAIRU over time using the WEO estimate for 1985 as a starting point and the year-to-year shifts of the wage curve. Calculated NAIRUs rose again in the early 1990s, but since then have declined again in France, Italy, and Spain. In Germany, where the labor market had been in a much better position to begin with and where reunification exacerbated labor market conditions, the calculated NAIRU did not decline significantly. In almost all cases, the calculated NAIRUs for 2000 are below estimates in the WEO or those made by the OECD. This might mean that the WEO and OECD estimates do not yet reflect the full extent of wage moderation—although it could also indicate that estimates of the NAIRU for 1985 are too low.

Selected Countries: NAIRUs, 1985 and 2000
(In percent)

	1985 WEO	2000 WEO	2000 OECD	2000 calculated 1/
France	9.1	9.0	9.4	5.9
Germany	5.6	7.3	6.7	5.5
Italy	10.1	8.8	10.2	6.9
Spain	18.2	14.6	14.2	7.5

Sources: IMF, World Economic Outlook; OECD, Analytical Database; and IMF staff calculations.

1/ Assumes δ_1=0.2.

Explaining wage curve shifts

107. The factors that could have curbed wage demands include: (i) a reduction of unemployment benefits; (ii) a lowering of labor taxation, relative to taxes applicable to income if unemployed; and (iii) behavioral changes of workers and their representatives toward increased emphasis on jobs. The last of these appears to have been by far the most important.

[55] See Blanchard and Katz (1997).

The role of unemployment benefits

108. **Benefits are an important determinant of reservation wages and changes in benefit levels therefore shift the wage curve.** Germany and Italy span the spectrum of generosity of unemployment benefits but once other income support and tax benefits are taken into account, the differences narrow (see tabulation below). In Germany, benefits can reach almost two thirds of wages earned prior to unemployment and generally last indefinitely. In Italy, by contrast, the replacement rate is 40 percent and duration is limited to 6 months in most cases. Both in Italy and Spain many unemployed are not eligible for benefits, mostly because they are first-time job seekers and because eligibility was tightened significantly in Spain.[56] Accordingly, only a little over half of the unemployed receive assistance in Italy and Spain. In terms of trend, OECD information for replacement rates shows that gross replacement rates have declined since the beginning of the 1980s in Spain and in Germany, which may have contributed somewhat to curbing wage demands in these countries (Figure III.8). In France, replacement rates increased dramatically in the 1980s and stood at the top of the rank among the four countries during the 1990s. In Italy, average gross replacement rates increased in the 1990s from low levels due to more generous benefits in the first year of unemployment.

109. **On the whole changes of unemployment benefits are unlikely to have mattered in the recent pick-up of employment growth.** For one, changes in the 1990s were rather modest in most countries. In Italy, the only country with a significant increase of generosity, the change should have dampened employment growth, not accelerated it. Moreover, relative employment performance of countries fails to even remotely match relative benefit changes.

[56] First-time job seekers are not eligible for unemployment benefits in Germany too but German youth unemployment is much lower than in the other countries.

Income Support for the Jobless

	1998–94	2000
Unemployment benefits		
Benefit replacement rate (in percent)		
France	57	...
Germany 1/	68/58	67/57
Italy 2/	20	40
Spain 3/	70	70
Benefit duration (in years)		
France	3	
Germany 1/	Unlimited 1/	
Italy 2/	0.5	0.5
Spain 3/	0.5/6	0.5/6

Total benefits for couples with two children, 1997
(in percent, after tax and including unemployment benefits, family, and housing benefits, first month) 4/

	Net replacement ratio	Unemployment benefits (in percent of total benefits)
First month of benefit receipt		
France	74	85
Germany	74	72
Italy	54	68
Spain	74	103
For long-term benefit recipients		
France	50	58
Germany	36	66
Italy	22	n/a
Spain	43	91

Gross replacement rates for unemployment benefits, 1997
(in percent of pre-tax, average over three family types)

	Year 1	Average over year 1-5
France	59	37
Germany	36	26
Italy	22	7
Spain	63	31

Sources: Nickell (1997); and OECD (1999d).

1/ Starting in 1994, replacement rates for unemployment compensation and assistance are, respectively, 67 percent and 57 percent. Duration of assistance for the former is one year and for the latter unlimited. Since 1994, a recipient who has not received unemployment compensation before can receive unemployment assistance only for one year and then needs to apply for social assistance. The duration is longer for older workers.

2/ Ordinary unemployment compensation; replacement rates and duration are higher and longer under a scheme for workers laid off by large firms in industry (up to 80 percent for 4 years). These workers account for about 10 percent of all the unemployed receiving support. The over-50 years old get benefits for 9 months as of 2000.

3/ Replacement rates can reach 70 percent; benefits last 0.5 to 6 years, depending on length of contribution.

4/ Taxes are recorded with a negative sign and thus the share of unemployment assistance can exceed 100 percent.

Developments in tax wedges

110. **The effect of taxes on employment is fundamentally an empirical issue.** Within the confines of the model outlined in Box III.1, changes in taxes might be expected to have little impact on employment unless they alter the difference between after-tax incomes for workers and the unemployed. It is debatable whether it is really relative taxation that matters, or whether the taxation of labor income plays a role independent of taxes on income if unemployed. It could be argued that, at least in the short run, cuts in labor taxation—more broadly defined to include employers' social security contributions—stimulate employment even if taxes on unemployment benefits are cut proportionately. The empirical evidence in the vast literature on the link between taxes and unemployment is not clear cut: Blanchard and Katz (1997), for example, note that the cross-sectional evidence in Europe does not reveal a strong correlation between tax rates and unemployment rates, nor between changes in tax rates and unemployment rates. By contrast, Daveri and Tabellini (2000) argue that if wages are set by strong trade unions, an increase in labor taxes is shifted onto higher real compensation and results in higher unemployment.[57]

111. **After-tax wages have moderated to an even larger extent than have pre-tax wages in the countries reviewed.** Figure III.9 shows developments in the tax wedge computed by the OECD. This wedge between wages and take-home pay comprises income tax as well as employees' social security contributions and is a very imprecise measure of C/C_u in equation (7). Tax wedges increased during the 1980s and the first half of the 1990s in most countries—the main exception was Spain—constraining growth of take-home pay and employment. The tax wedge has subsequently leveled off. Germany experienced a particularly sharp increase in the tax wedge in 1992-95 to pay for some of the costs of reunification.

112. **Social security contributions were cut in some countries in the second half of the 1990s** owing largely to cuts in the employer-paid portion (Figure III.9). In France, these cuts which began in 1993 and were quite sharp in 1998 were targeted to low-skilled, low-paid labor, and indeed, the long-standing trend of falling employment in this segment of the labor market came to a halt around that time. Social security contributions were also cut sharply in

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[57] The authors' results suggest that a 10 percentage point increase in effective labor tax rates, through the effect on wages, can account for a 4 percentage point increase in European unemployment. Similarly, Marino and Rinaldi (2000) find that, in OECD countries, an increase in the effective labor tax rate by 1 percentage point raises labor costs by 1.1 percent in the first year and 1.4 percent in the long run. And, for Italy in particular, Brunello and others (2000) observe a cointegrating relationship between unemployment, the tax wedge, the real interest rate, and union power: according to their simulations, a reduction in the tax wedge from the level in 1996 to the one of the early 1980s would yield a 15 percent reduction in the unemployment rate, with about 70 percent of this reduction taking place after five years.

Italy in 1998. In Germany and Spain, social security contributions were increased slightly, although targeted reductions in employer social security contributions in Spain may have contributed to employment growth for specific demographic groups.

113. **Despite significant changes, labor taxation is unlikely to hold the key for explaining the shift of the wage curve in the 1990s.** Changes of employers' social security contributions played a major role in developments of the tax wedge and they affect the labor demand curve rather than the wage curve in the framework of this study. Moreover, the framework suggests that the relative taxation of labor income and benefits matters. Relative taxation likely changed little; in Germany, for example, benefits remain untaxed and are set at fixed fraction of the *net* earnings prior to unemployment, so that relative taxation does not change by definition.

Changes in worker preferences

114. **The part of the wage curve shift that is neither due to changes in unemployment benefits nor to changes of labor taxation can be attributed to workers and their representatives placing more emphasis on job preservation and creation.** In the 1990s, this phenomenon, called here wage moderation, was the dominant factor behind the outward shift in the wage curve.

115. Figure III.10 illustrates how wage moderation evolved over time. It simply plots unemployment-adjusted real effective wages while controlling for effects from changing unemployment benefits and labor taxation.[58] Since the early to mid-1980s, wages have moderated significantly but increasing labor taxation offset much of the effect on labor costs (Figure III.10). Wages moderated by around 10 percent in Spain and France; by somewhat less in Italy; and actually increased in Germany (see bold line in Figure III.10). Labor taxation increased in all countries except for Spain, so that gross wages moderated by much less (see dotted line in Figure III.10).

116. **These results—together with those obtained earlier on labor demand—would imply that much of the employment intensity of growth in the current expansion can be attributed to wage moderation on the part of labor.** Workers' wage demands grew sharply in the 1970s, and, boosted by large increases in the tax wedge, this led to a slowdown in employment growth. At the same time, labor demand declined because of the adoption of more capital-intensive technologies and rising payroll taxes. With a trend toward greater wage moderation since the mid-1980s, and in the face of a stabilization of the labor demand curve, employment has begun to rise significantly.

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[58] Variations in prices and labor productivity are assumed to capture changes of income if unemployed and variations of the tax wedge are used as a proxy for changes of labor taxation.

117. **The above results are subject to the potential caveat that they are derived using average wages rather than disaggregated wage data.** Average wages might not adequately reflect wage developments if the sectoral, demographic, or skill composition of employment changes over time. For example, if employment starts shifting toward the service sector, where wages tend to be lower, average wage growth will decelerate even if wage growth in each sector individually remains constant.[59] Therefore, part of observed average wage restraint over the last 15 years might simply reflect compositional changes of employment caused by an accelerated expansion of the service sector, by higher growth of low-skilled employment, or by increased employment of low-paid demographic groups. However, the broad trends in the composition of employment across countries have been similar, with the service sector gaining at the expense of manufacturing and agriculture everywhere. This suggests that the conclusions regarding the relative degree of wage moderation across countries would still hold. Moreover, absolute estimates of wage moderation only change if the compositional change in the workforce is not adequately reflected in the productivity measure that is used to obtain real effective wages, an issue which lies beyond the scope of this paper.[60]

D. Beyond Wage Moderation

118. **While wage moderation is playing a key role in creating jobs its effectiveness depends on how individual labor markets function at a more micro level.** For example, across-the-board wage moderation is only a second-best strategy if labor market imbalances afflict predominantly certain regions and demographic groups. And in general, it is less effective where tight regulation or active policies inhibit the functioning of the labor market.

Wage dispersion

119. **Wage dispersion measures differences in wage rates across skill groups, regions, or age groups.** Wide differences in unemployment rates between various groups of workers, the so-called mismatch, are indicative of insufficient wage dispersion. Mismatch captures both transitory and persistent imbalances between the supply of and demand for labor across skill groups, regions, and age groups. Section B showed that mismatch is an issue in the countries reviewed: youth unemployment is between 2½ to 4 times higher than adult unemployment in all countries but Germany; unemployment among women is higher than

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[59] In the literature, composition changes of employment have been shown to seriously affect average wages over the business cycle. See for instance, Chirinko (1980), Keane, Moffitt, and Runkle (1988), or Keane and Prasad (1993).

[60] Estevão and Nargis (2001) use individual level data to estimate shifts in the wage curve in France in the 1990s. They show that there was a 16 percent decline in average hourly wages adjusted for inflation, productivity growth, unemployment changes, and variations in the composition of the unemployment pool.

among men; and unemployment rates differ considerably across regions within countries. Within the framework of overall wage moderation, more variation in wages across groups and regions would help to speed the narrowing of such unemployment differentials. However, overall, the evidence suggests that both wage dispersion across regions and skills has not increased significantly during the 1990s, except in eastern Germany, which started out with highly overpriced labor. Accordingly, there should be considerable room for reducing the NAIRU by allowing more wage dispersion.[61]

Regional wage dispersion

120. **Regional relative unit labor costs are not negatively correlated with regional relative unemployment rates.** In particular, unit labor costs levels in areas with higher unemployment are not lower than in areas with low unemployment, nor have they slowed sharply relative to such areas, except in eastern Germany. Despite progress, eastern Germany's unit wage costs remain far above those prevailing in western Germany. Indeed, in Germany, relative wage costs of the high-unemployment region exceed those in Spain and Italy, where unit labor costs in the high unemployment regions are comparable to those in the low-unemployment regions (see tabulation below). France has no regional unemployment problems on the scale of those in the other countries.

121. **Except in eastern Germany during 1991-95, relative unit labor costs respond little to relative change in unemployment rates.** The wage curve of equation (8) can be used to gauge how labor costs should have evolved in the less prosperous regions relative to their more prosperous counterparts. The evolution of relative unemployment rates predicts a decline in relative unit labor costs between 1983-2000 of 27 percent in southern Italy relative to the center-north and of 5½ percent in Andalucia relative to the country as a whole. Actual relative unit labor costs hardly moved or even increased.[62] The same holds for the 1990s. In contrast, relative unit labor costs in eastern Germany declined during 1991-2000 by some 20 percent, more than suggested by the evolution of relative unemployment rates (9 percent). Unfortunately the decline of relative unit costs was primarily the result of massive labor-shedding.

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[61] For the relation between the NAIRU, the mismatch, and the variance of unemployment rates see Layard, Nickell, and Jackman (1991).

[62] Brunello, Lupi, and Ordine (2000) find that wages in southern Italy are a function of labor market conditions in northern Italy and thus do not respond to local labor market conditions.

Regional Labor Market Developments

		Eastern Germany	Southern Italy	Andalucia
Unemployment rate	1983	...	10.1	22.5
	1991	10.3	16.2	24.7
	1995	14.9	20.4	33.8
	2000	18.8	21.0	24.5
In percent of west (Germany),	1983	...	153.0	129.3
center-north (Italy),	1991	163.5	324.0	154.4
or country total (Spain)	1995	160.2	268.4	146.3
	2000	216.1	350.0	173.9
Unit Labor Costs (ULC)	1983	...	101.4	102.7
In percent of west (Germany),	1991	142.5	102.3	96.5
center-north (Italy),	1995	115.5	103.0	100.4
or country total (Spain)	2000	112.6	104.5	101.2
Predicted change in ULC (δ_1=0.2),	1983-2000	...	-26.9	-5.6
in percent	1991-2000	-8.9	-4.4	-1.4
Actual change in ULC, 1/	1983-1995/98	...	3.1	-1.6
in percent	1991-2000	-20.4	0.6	3.1

Sources: EUROSTAT; national authorities; and IMF staff calculations.

1/ Data on unit labor costs are only available through 1995 for Spain and 1998 for Italy. For Spain, unit labor costs were calculated for 1996-2000 with the help of regional data on contractual wages.

Unemployment across skill levels and demographic groups

122. **With respect to skills or demographic groups, data limitations make it difficult to assess the extent to which wage moderation has occurred.** In all countries but Germany, the unemployment rate of the young is considerably higher than that of the adult population (Figure III.3). The compression of wages across skills during the 1970s and 1980s is well documented in the literature.[63]

123. **The evidence on the development of wage differentiation in the 1990s is mixed, but sea changes do not appear to have taken place.** According to Atkinson, Glaude, and Olier (2001) wage dispersion in France remained relatively stable in the 1990s, indicating

[63] Erikson and Ichino (1995); Freeman and Katz (1995); Sachverständigenrat (2000); Schimmelpfennig (2000); Prasad (2001); and the OECD Jobs Study (OECD, 1994).

that wage compression across skill levels came to a halt. Interestingly, wage dispersion within low skill categories has lately increased. In the case of Italy, wage differentials have started to edge up in the first half of the 1990s, especially for male workers (Brandolini and Sestito, 1999). Germany was characterized by a relatively stable wage structure in the 1990s. While Prasad (2001) reports a marginal increase of the skill premium over the last decade, Schimmelpfenning (2000) finds that wage differentiation across skills continued to decline into the 1990s. In Spain, wage dispersion was stable at the low end of the income distribution but increased significantly in the upper part of the distribution during the 1980s (Bover, Bentalila, and Arellano (2001)).

Active labor market policies

124. **Studies have confirmed that some active labor market policies—such as job search assistance, training programs and financial assistance for would-be entrepreneurs—can be effective in stimulating employment and reducing unemployment.**[64] However, studies have also found that, in general, the more broadly-defined the intended beneficiaries of an ALMP, the less effective these policies tend to be. For example, broadly-based employment subsidies may have little impact on employment relative to the amount of spending they involve either because of heavy deadweight losses (when firms accept subsidies to hire workers they would have been willing to contract in any case) or substitution effects (when firms simply replace nonsubsidized workers with subsidized ones without increasing total employment). Because the composition of spending on ALMPs is as important as the level, it is not surprising that there is little empirical evidence that high aggregate levels of ALMPs correspond to lower rates of unemployment or faster employment growth.[65]

125. **Assessing the role of ALMPs in boosting employment during the 1990s would require time series data on spending and an evaluation of the evolution of policies over time.** Due to lack of data, this section merely takes stock of these policies. Spending on ALMPs as a percentage of GDP varies from about 1¼ percent of GDP in France to ¾ percent of GDP in Spain (see tabulation below). The variation in spending is significantly greater once scaled for unemployment levels and worker productivity: spending on ALMPs per unemployed person in Germany was equal to about 12 percent of output per worker, roughly three times the level prevailing in Spain.

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[64] For example, see Scarpetta (1996).

[65] See Layard, Nickell and Jackman (1991).

Selected Countries: Spending on Active Labor Market Policies

	As percentage of GDP	Per unemployed individual as share of output per worker
France	1.3	9.3
Germany	1.0	12.1
Italy	1.1	8.3
Spain	0.8	4.2

Sources: OECD; national authorities; and IMF staff calculations.
Note: Data for France and Italy are for 1996. Data for Germany are for 2000, and data for Spain are for 1999.

126. **The composition of spending on ALMPs differs significantly across countries.** In particular, spending in Italy in the late 1990s was heavily biased towards private sector employment subsidies, compared to France and especially Germany and Spain. By contrast, all three of these latter countries dedicated a significantly greater share of spending to direct job creation in the public or nonprofit sectors. None of the four countries devoted a particularly large share of spending to public employment services (which in the United States and the United Kingdom account for more than one-third of spending on ALMPs). This type of spending is reckoned to be among the most efficient forms of ALMPs. In addition, Italy devoted almost no spending to labor market training, although the bulk of the subsidies serves to sustain apprenticeship schemes and on-the-job training.

Selected Countries: Distribution of Spending on Active Labor Market Policies

(As percent of total)

	Public employment services	Training 1/	Subsidies 1/	Job creation 1/	Other 1/
France	12	27	19	17	25
Germany	17	29	4	21	30
Italy	4	1	52	4	40
Spain	16	28	22	12	22

Source: OECD.
1/ "Training" refers to labor market training; "subsidies" to subsidies for regular employment in the private sector; "job creation" to direct job creation in the public or nonprofit sectors; and "other" to youth measures, support for unemployed persons starting enterprises, and measures for the disabled. Data are for 1997 (France 1996).

127. **Evidence suggests that considerable scope exists to improve the efficiency of ALMPs.** In *France,* some active labor market programs have created a substantial number of jobs, although they do not seem effective in securing participants durable jobs in the private sector. Among them, the *emploi jeunes* program, which aims at ameliorating the problem of youth unemployment in France, created about 240,000 jobs between 1997 and 2000. In *Germany,* a study conducted for the budget committee of the parliament found that public employment programs have had a limited impact in reducing unemployment as such programs have not served as a useful means of moving workers into the primary labor market. In *Italy,* the targeting of policies could be improved significantly: while the south harbors two thirds of the unemployed, with the youth unemployment rate at over 50 percent, only about ½ of the positions supported under active policies are located there and less than a quarter of these positions support education or training. Also, some of the policies have been ineffective in finding lasting employment for participants: under a specific job creation scheme, young labor force participants are publicly employed for "socially useful" purposes. This scheme was introduced in 1998 and covered some 150,000 people, about 80 percent of whom were employed in the south, but as the scheme expired, participants found it very difficult to find durable jobs in the private sector. In *Spain*, studies conducted by INEM, the national employment service, have found that unemployed individuals completing training courses are only slightly more likely to find employment than individuals who do not receive training.

128. **Overall, there seems to be little reason to suppose that the increased employment intensity of growth in recent years is substantially due to the use of ALMPs.** While an extensive study of the changing impact of ALMPs in recent years is beyond the scope of this paper, a highly impressionistic examination of the evidence—along with some studies undertaken by country authorities—raises doubts. First, the country that has spent the most on these policies per unemployed population—Germany—has recorded the slowest rate of employment growth, while that which has spent the least—Spain—has recorded the most dramatic increase in employment growth. Second, the allocation of spending on ALMPs in all four countries would appear to be sub optimal, either in terms of services, regions, or both; in particular, a number of important ALMPs have failed to provide participants with lasting jobs.

Labor market deregulation

129. **The revival of employment growth in Europe in the second half of the 1990s coincided with a loosening of stringent labor market regulations.** As a proxy for labor market regulation in general, this paper examines the strictness of Employment Protection Legislation (EPL), which is monitored by the OECD on a regular basis. In the definition of the OECD, EPL encompasses regulations governing severance pay, redundancy procedures, special requirements for collective dismissals, fixed-term contracts, temporary work agencies, rules favoring disadvantaged groups, etc. It takes into account legislated regulation as well as regulation that is grounded in collective bargaining, court interpretations of legislative and contractual provisions, and private agreements. However, the EPL measure does not capture some potentially important aspects of labor market regulation such as the

setup of the process of wage determination, working time restrictions, and governments' role in wage fixing.

130. **The effect of EPL on employment and unemployment has been the subject of extensive empirical and theoretical research.** While economists generally tend to favor more flexible labor markets arrangements, the findings of the research on the effect of EPL are less clear cut. A recent empirical study by the OECD finds that stricter EPL tends to be associated with lower employment-to-population ratios, but detects no significant linkage between EPL and overall unemployment (OECD, 1999b). It also finds that stricter EPL tends to improve employment opportunities of prime-age men at the expense of the rest of the population. Moreover, stricter EPL tends to lower the turnover in the labor market, meaning that long-term unemployment accounts for a bigger share in total unemployment. Blanchard and Wolfers (2000) find that a measure of EPL interacted with shocks explains well the different unemployment performances across Europe over time.

131. **In line with the general trend, Italy, Germany, and Spain made EPL more flexible over the last decade, but France made it somewhat more stringent.** All four countries remain on the more restrictive side compared to the OECD average. Among the four countries, Germany is listed as the least restrictive followed by France, Spain, and Italy. In their relative ranking Germany and France have switched position since the late 1980s; there was no change in the relative position of Spain and Italy.

132. **Much headway is attributable to the relaxation of regulations governing temporary employment.** In Italy and Germany, it has become easier to renew fixed-term contracts and temporary work agencies were allowed broader scope of operation, while the maximum cumulated duration of temporary work contracts was increased. Moreover, the bias against part-time employment stemming from social security contributions was eliminated in Italy, leading to very strong growth in these positions. Recently, the trend toward more flexibility in Germany is likely to have come to a halt since the OECD took stock of EPL.

133. **Spain is the only country to have introduced significantly more flexibility in the area of permanent contracts, while France stands out for having tightened regulation during the 1990s.** In Spain, notification periods for dismissal were shortened and severance payments in the case of unfair dismissal reduced. The definition of fair dismissals was also broadened, although labor courts were slow to adopt this new definition. Moreover, 1997 saw the introduction of a new permanent contract with lower firing costs for special groups. Also, the liberalization of regulations governing fixed-term contracts predated the late 1980s, and therefore does not show up as an improvement during the 1990s.[66] France's EPLs became more stringent as a result of new limitations on fixed-term contracts and the operation of

[66] In 2001, firms were required to provide termination payments to workers upon the expiration of fixed term contracts, increasing the level of EPL.

temporary work agencies. Significant other changes, such as the reduction of the standard workweek and reductions of employer's social security contributions, are not captured by the OECD's EPL measure.

134. **EPL does not to appear to be a promising candidate for explaining cross-country differences in employment performance during the 1990s,** although their loosening in Italy and Spain certainly supported employment generation. While Germany and Italy show the largest degree of EPL relaxation they also feature the worst employment growth performance. France, the only country that tightened EPL, nonetheless experienced rapid employment growth. As to Spain, important labor market deregulation predated the period covered by OECD EPL data, so that its role is potentially understated here. A number of variables could potentially be influenced by EPLs. The only variable that has the expected association is the ratio of employment to working age population, which is strictly falling with the strictness of EPLs. Of course, this is not to say that employment performance is unrelated to the strictness of EPLs. Rather, it means that other more important factors dominated the effects of cross-country differences in measured EPL reform.

E. Conclusions

135. Output growth has been significantly more employment intensive in the 1990s than in previous decades in France, Italy and Spain, but not in Germany if full-time equivalent units are used. **This increased output elasticity of employment growth reflects primarily wage moderation**. There is strong evidence of a downward shift in the wage curve: after controlling for the unemployment rate and changes in productivity, real wages grew sharply in the 1970s and early 1980s, but have since moderated everywhere. Put another way, for a given unemployment rate, workers today appear to be willing to accept a lower real effective wage than was the case in the past. The shift of the wage curve appears to reflect mainly a more job-conscious bargaining stance of workers. Labor demand also contributed to more job-intensive growth in the second half of the 1990s, possibly owing to less substitution of capital for labor as wage costs have moderated and to cuts in employer-paid social security contributions.

136. **Other factors such as the use of active labor market policies, labor market deregulation, or benefit reform seem unlikely to be at the heart of the cross-country differences in employment performance and the increased job intensity of growth**. More often than not these factors were not systematically associated with the relative employment performance of countries; some of the factors did not change much over time and are therefore unlikely to have had much of a significant quantitative impact. However, deregulation of the labor market, particularly of part-time and temporary employment, may have increased incentives for some segments in the population to return to the labor market. And, in France, the laws aiming at the reduction of the standard workweek to 35 hours seems to have had a positive effect on job creation so far.

137. **The lack of improvement in employment growth in Germany can be traced to a smaller decline in productivity-adjusted labor costs since the mid-1980s.** As Germany

avoided the sort of excesses that plagued other continental labor markets in the 1970s and early 1980s, unemployment—despite less wage moderation—is still lower than in the other countries, although it remains high by historical standards. However, an overly rapid convergence of eastern toward western German wage levels has caused unemployment in the east to shoot up to nearly 20 percent. As a result, a structural, regional labor market problem has emerged that, in many ways, is comparable to the regional problems in Italy and Spain. Barring a major change in wage setting, the problem in the east may well turn out as long-lasting as the regional problems in the other countries. In addition, the increase in the tax wedge during the 1990s, which was related to the financing of reunification and was unique among the countries reviewed here, made wage moderation all the more painful in Germany.

138. **A number of policy implications arise from this study:**

- First, and most critically, **wage moderation does work.** Much of the growth of employment in recent years can be traced to greater wage moderation. With unemployment rates in all four countries at historically high levels, wage moderation needs to continue.

- **Scope exists for continued labor cost reduction through cuts in the tax wedge.** Some countries have recently embarked on moves in this direction, but given the sharp increase in the tax wedge that has occurred everywhere since the 1970s, there remains considerable room to be exploited in this regard.

- **There is a need for greater wage dispersion in addition to continued moderation.** Within individual countries there is no evidence that wage moderation has been greater in regions with relatively high rates of unemployment, and substantial disparities in unemployment rates exist across either regions, genders, age groups, or all three in all countries.

- **Employment growth can be supported by less generous unemployment benefits.** In the countries reviewed, net replacement rates remain very high. A reform of unemployment compensation schemes could contribute to further increasing the employment intensity of growth by reducing workers' reservation wages. Unemployment compensation in each of the countries under review, except Italy, is relatively generous, with respect either to level, duration, or both.

- Finally, there appears to be scope to further support employment growth through **better use of active labor market policies.**

Table III.1. Selected Countries: Employment Intensity During Upswings, 1970-2000 1/

	1970-95 average	1996-2000 average
Employment in the whole economy		
France	0.22	0.47
Germany 2/	0.17	0.49
Italy	0.06	0.64
Spain	0.32	0.96
All four countries	0.19	0.64
Employment in the business sector		
France	0.13	0.51
Germany 2/	0.14	0.56
Italy	0.16	0.54
Spain	0.20	0.88
All four countries	0.16	0.62
Fulltime-equivalent employment 3/		
France	0.14	0.40
Germany 2/	0.15	0.22
Western Germany	0.08	0.11
Italy	0.19	0.51
Spain	0.32	0.85
All four countries	0.18	0.47

Sources: OECD Analytical Database; IMF WEO Database (for output gap); INSEE for (fulltime-equivalent employment in France); IAB (for worktime by employment groups in Germany); and IMF staff calculations.

1/ Upswings are defined as years of shrinking output gap. Employment intensity is the ratio of employment to GDP growth.

2/ Excluding 1991, the first year of data for reunited Germany.

3/ Parttime jobs, self-employment, and work of unpaid family members converted into fulltime jobs of employees in proportion to relative hours worked.

Table III.2. Selected Countries: Fulltime-Equivalent Employment by Sector, 1991-2000

	France	Germany	Western Germany	Italy	Spain
			(Employment growth in percent) 1/		
Agriculture	-22.4	-43.0	-31.7	-33.0	-17.7
Industry	-13.7	-24.5	-17.5	-6.2	-0.1
Construction	-11.3	-1.8	-6.8	-3.9	16.7
Trade, hotels and restaurants, transport	7.3	-3.5	-1.8	2.2	11.1
Financial sector, renting, and business services	18.3	37.2	32.6	28.4	39.2
Public and household services	11.2	3.7	6.5	1.8	19.8
Total	2.8	-6.1	-2.7	-0.7	9.9
			(Contribution to employment growth in percent)1/		
Agriculture	-1.4	-2.2	-1.3	-2.8	-1.9
Industry	-2.8	-7.3	-5.3	-1.5	0.0
Construction	-0.9	-0.1	-0.5	-0.3	1.7
Trade, hotels and restaurants, transport	1.3	-0.8	-0.4	0.6	3.1
Financial sector, renting, and business services	2.8	3.5	3.3	2.8	2.8
Public and household services	3.7	0.9	1.5	0.5	4.2
Total	2.8	-6.1	-2.7	-0.7	9.9

Sources: IMF staff calculations based on data from INSEE, IAB, Banca d'Italia, and Banco de España.

1/ Cumulative during 1991-2000.

Table III.3. Selected Countries: Decomposition of Labor Productivity Growth, 1970-2000 1/

	1971-80	1981-90	1991-2000	1997-2000
	(In percent per annum)			
France				
Labor productivity growth 2/	4.3	3.0	1.9	2.2
TFP contribution 3/	2.6	1.8	0.9	1.7
Capital deepening contribution 4/	1.6	1.2	1.0	0.6
Germany 5/				
Labor productivity growth 2/	4.0	2.7	2.0	1.5
TFP contribution 3/	2.2	1.6	1.1	1.0
Capital deepening contribution 4/	1.9	1.1	0.9	0.5
Italy				
Labor productivity growth 2/	4.0	2.1	2.0	1.2
TFP contribution 3/	2.8	1.4	1.0	0.5
Capital deepening contribution 4/	1.2	0.8	1.0	0.7
Spain				
Labor productivity growth 2/	4.5	3.5	1.9	0.5
TFP contribution 3/	2.5	2.3	0.8	0.4
Capital deepening contribution 4/	2.1	1.3	1.2	0.0

Sources: IMF staff calculations; OECD Analytical Database, and unpublished data on hours worked.

1/ Refers to the business sector.

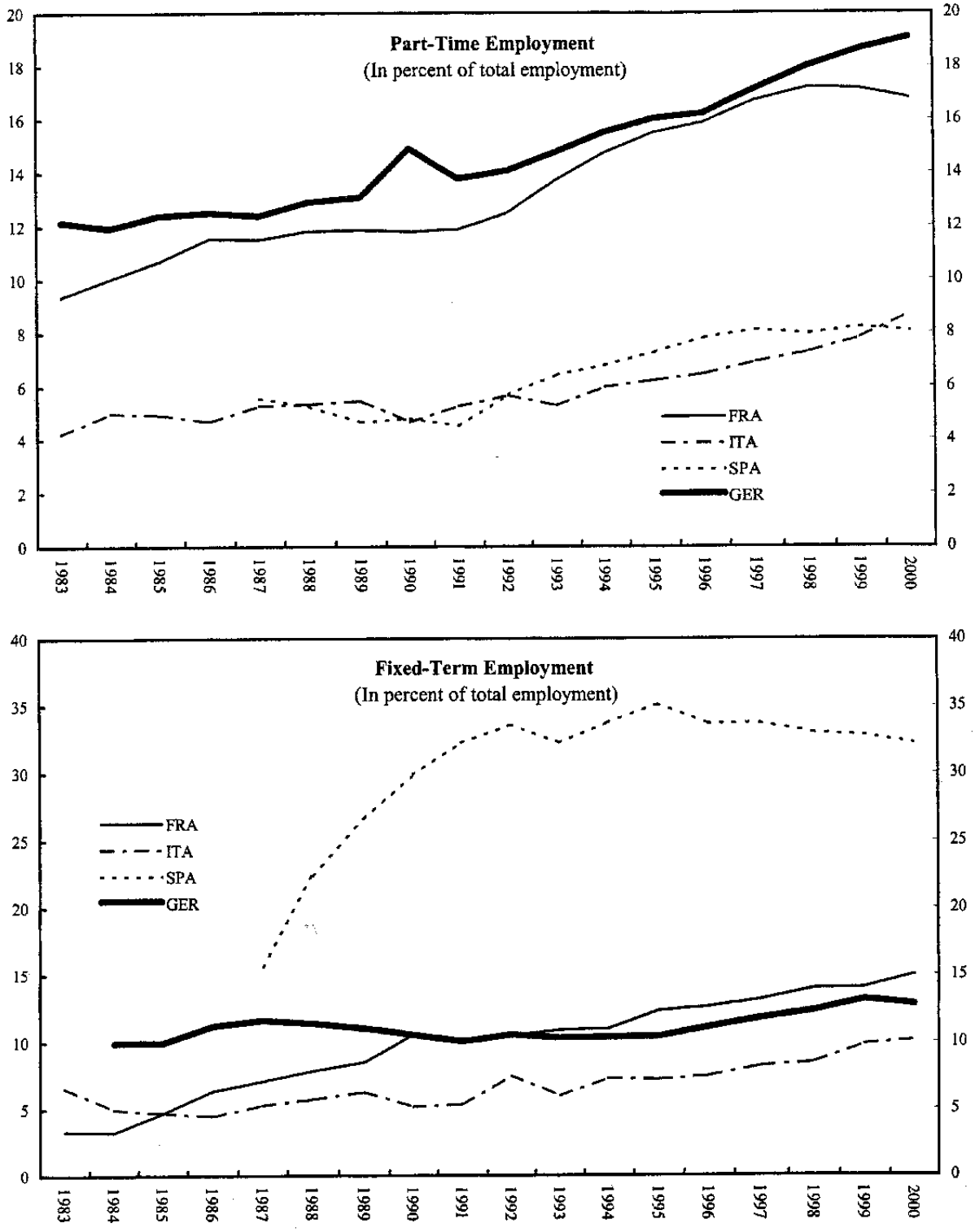
2/ Growth of output per hour worked.

3/ Contribution of total factor productivity (TFP) growth to labor productivity growth.

4/ Contribution of capital per hour worked to labor productivity growth.

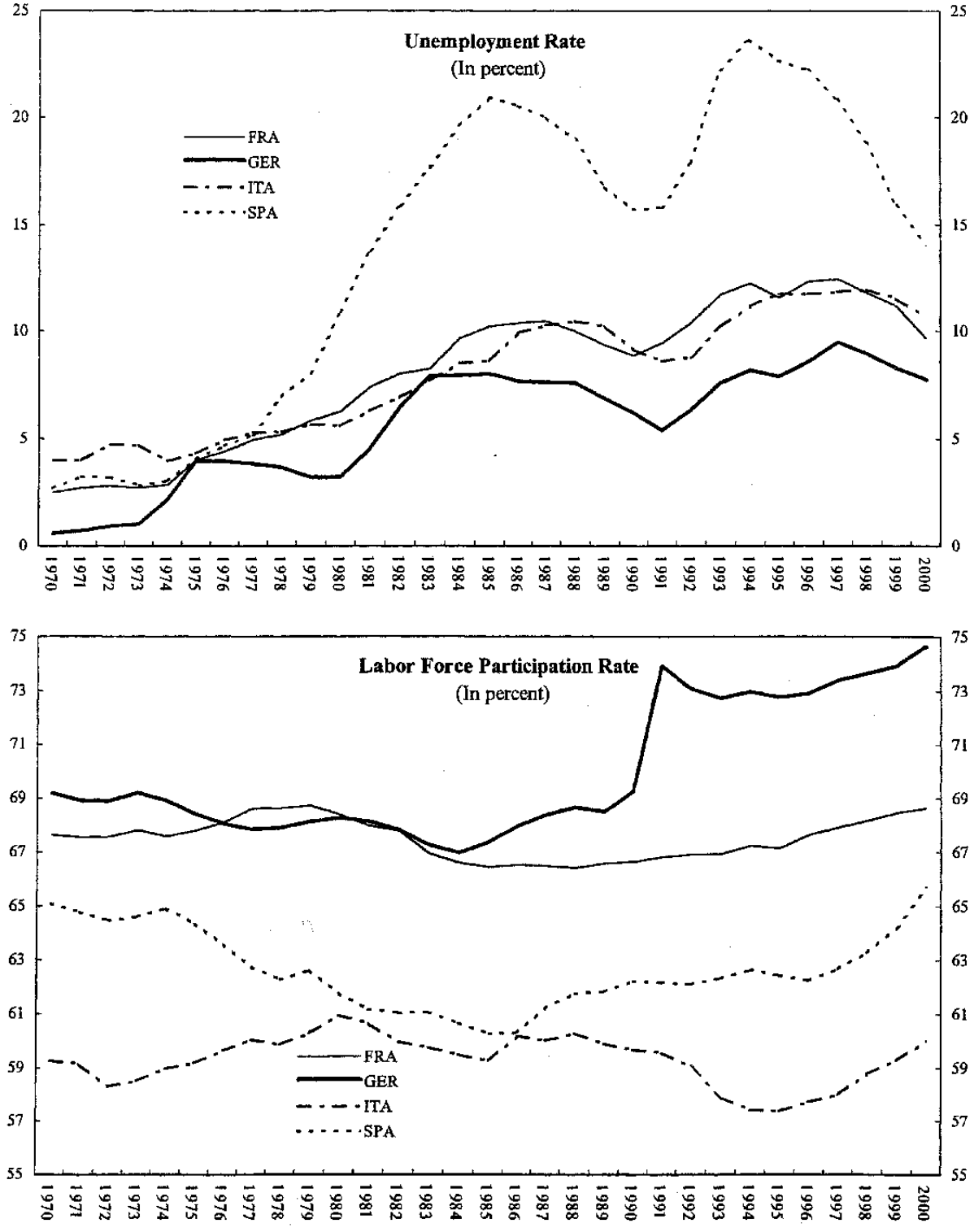
5/ Calculations exclude growth in 1991, the first year of data for reunited Germany.

Figure III.1. Selected Countries: Atypical Work Contracts, 1983-2000



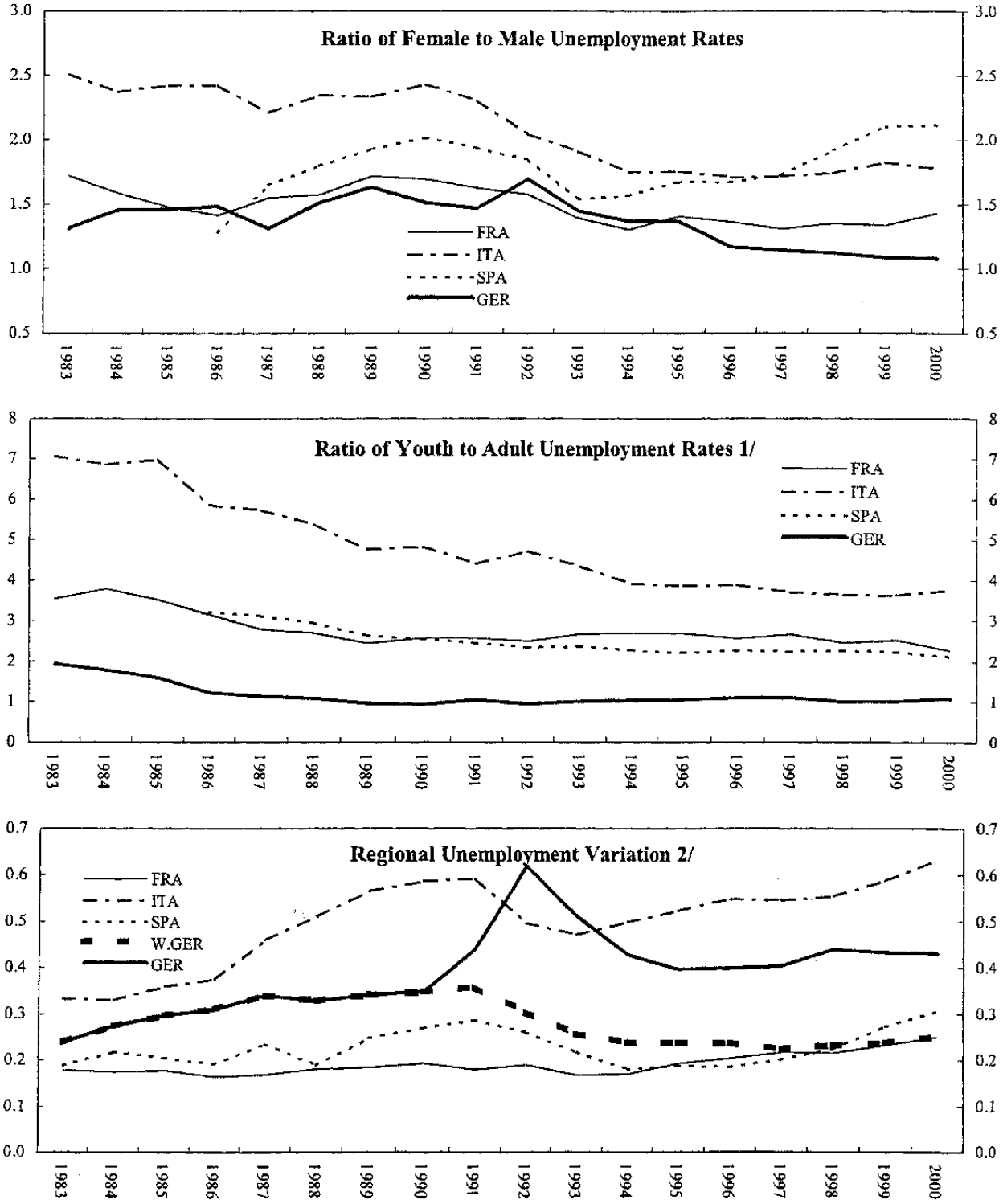
Source: EUROSTAT NewCronos Database.

Figure III.2. Selected Countries: Unemployment and Labor Force Participation, 1970-2000



Source: OECD Analytical Database.

Figure III.3. Selected Countries: Unemployment Dispersion, 1993-2000

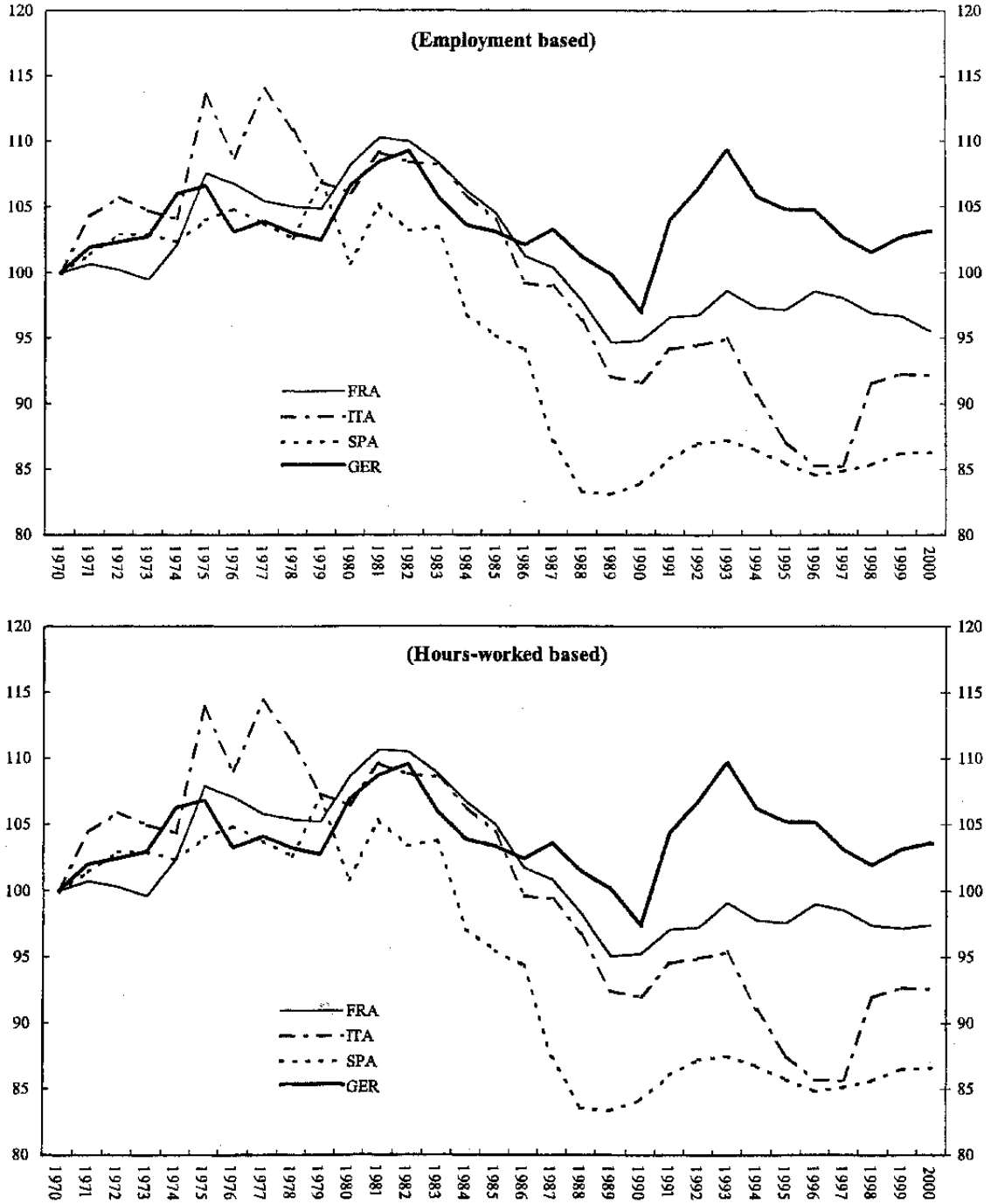


Sources: IMF staff calculations; and EUROSTAT NewCronos database.

1/ Unemployment rate for the 15-24 year old unemployed divided by the unemployment rate for the 25-64 year unemployed.

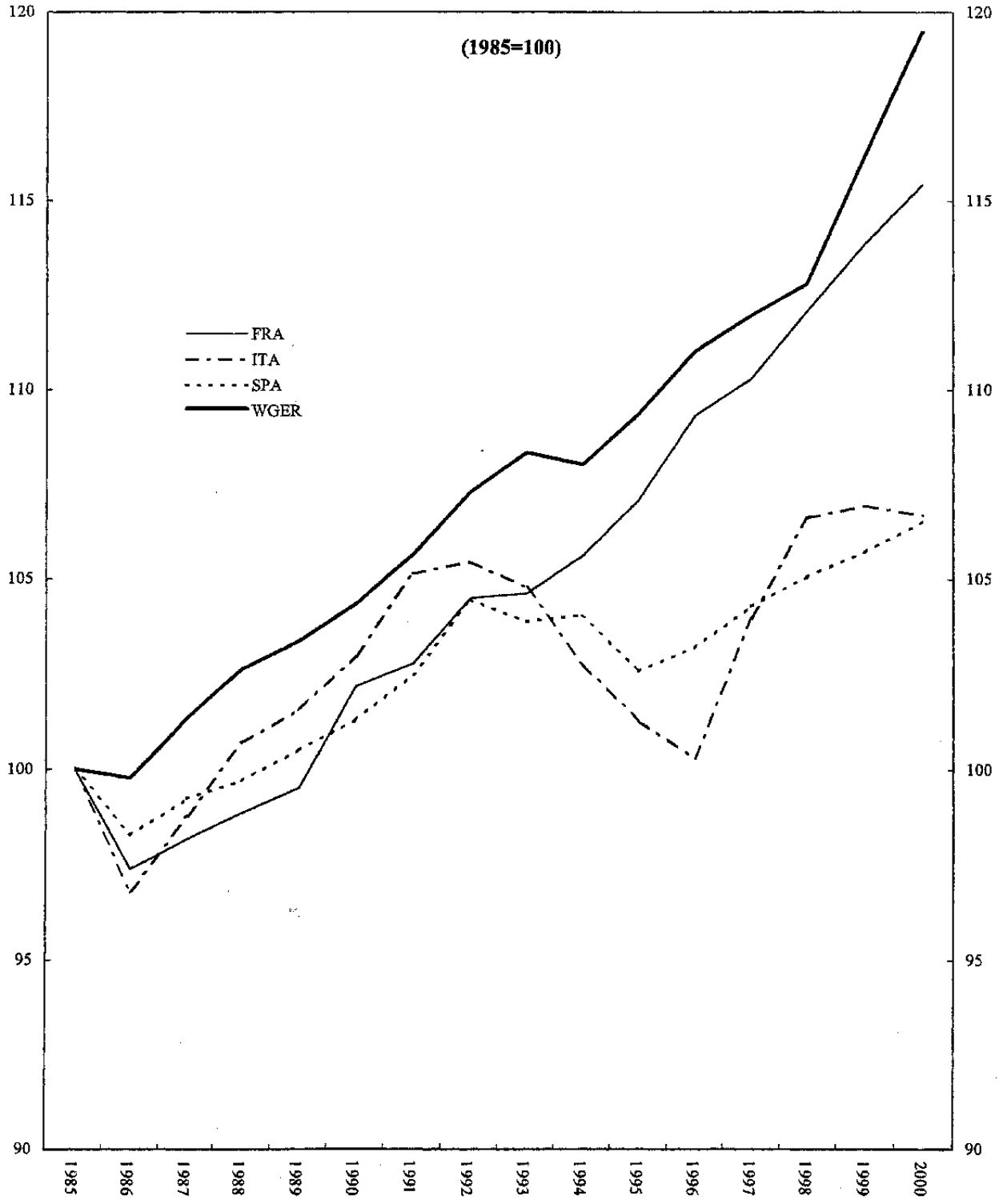
2/ Coefficient of variation across NUTS level 1 regional unemployment rates.

Figure III.4. Selected Countries: Real Effective Wage in the Business Sector, 1970-2000
(1970=100)



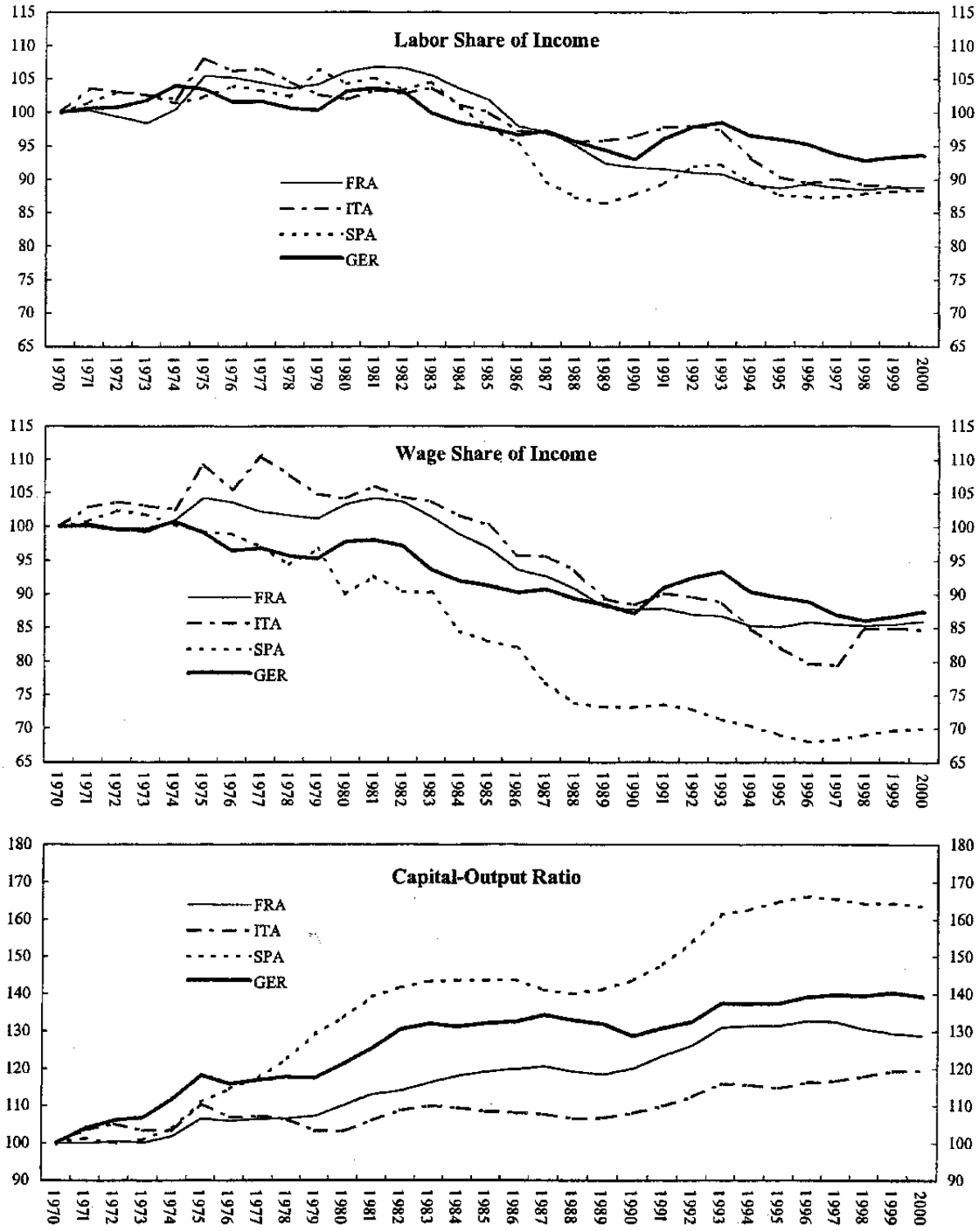
Sources: IMF staff calculations; OECD Analytical Database and unpublished data on hours worked per employee in the business sector (France and Germany) and in the whole economy (Italy and Spain).

Figure III.5. Selected Countries: Real Contractual Wages, 1985-2000



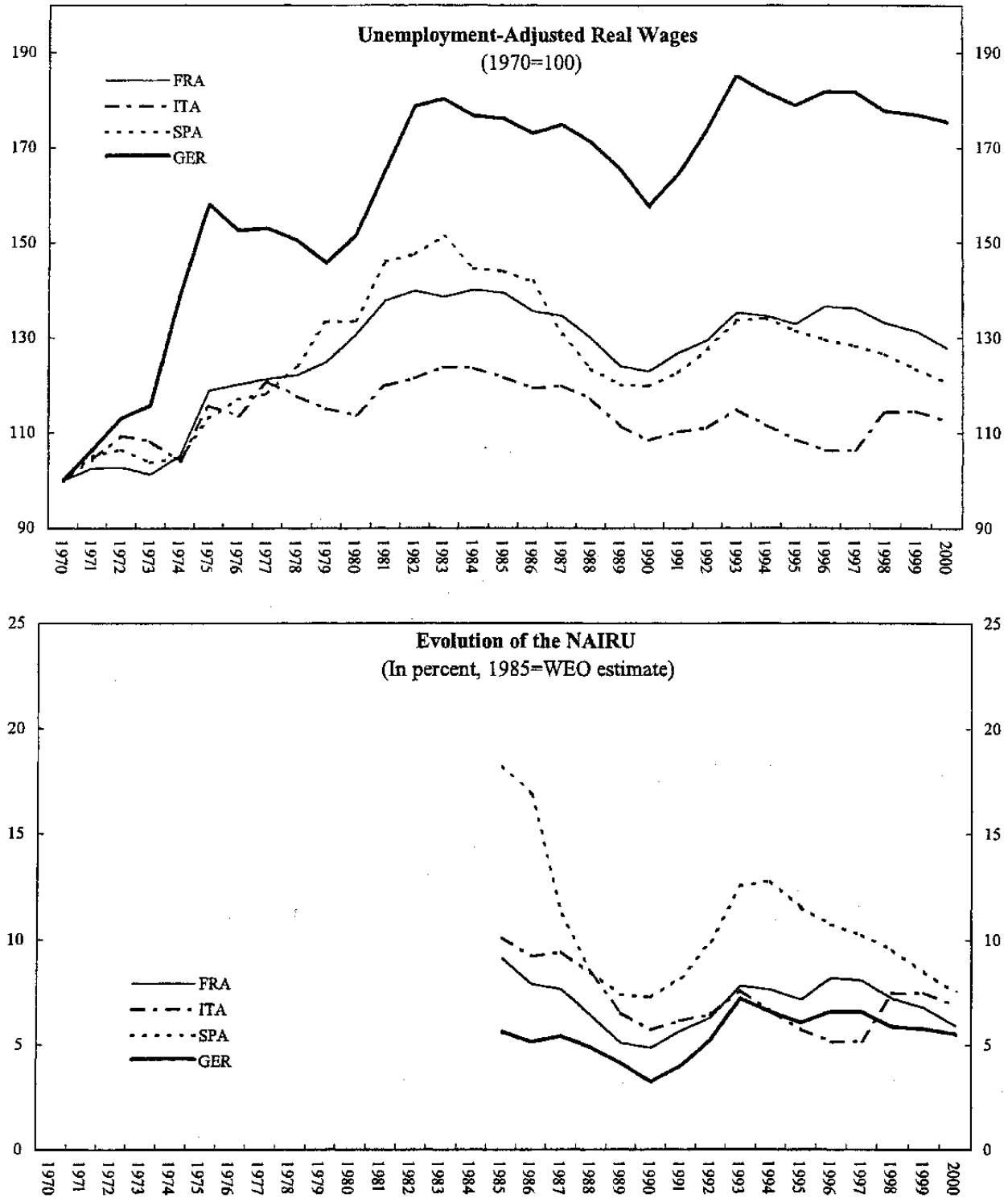
Sources: IMF staff calculations; national sources (nominal contractual wages); and OECD Analytical Database (GDP deflator).

Figure III.6. Selected Countries: Labor and Capital in the Business Sector, 1970-2000
(1970=100)



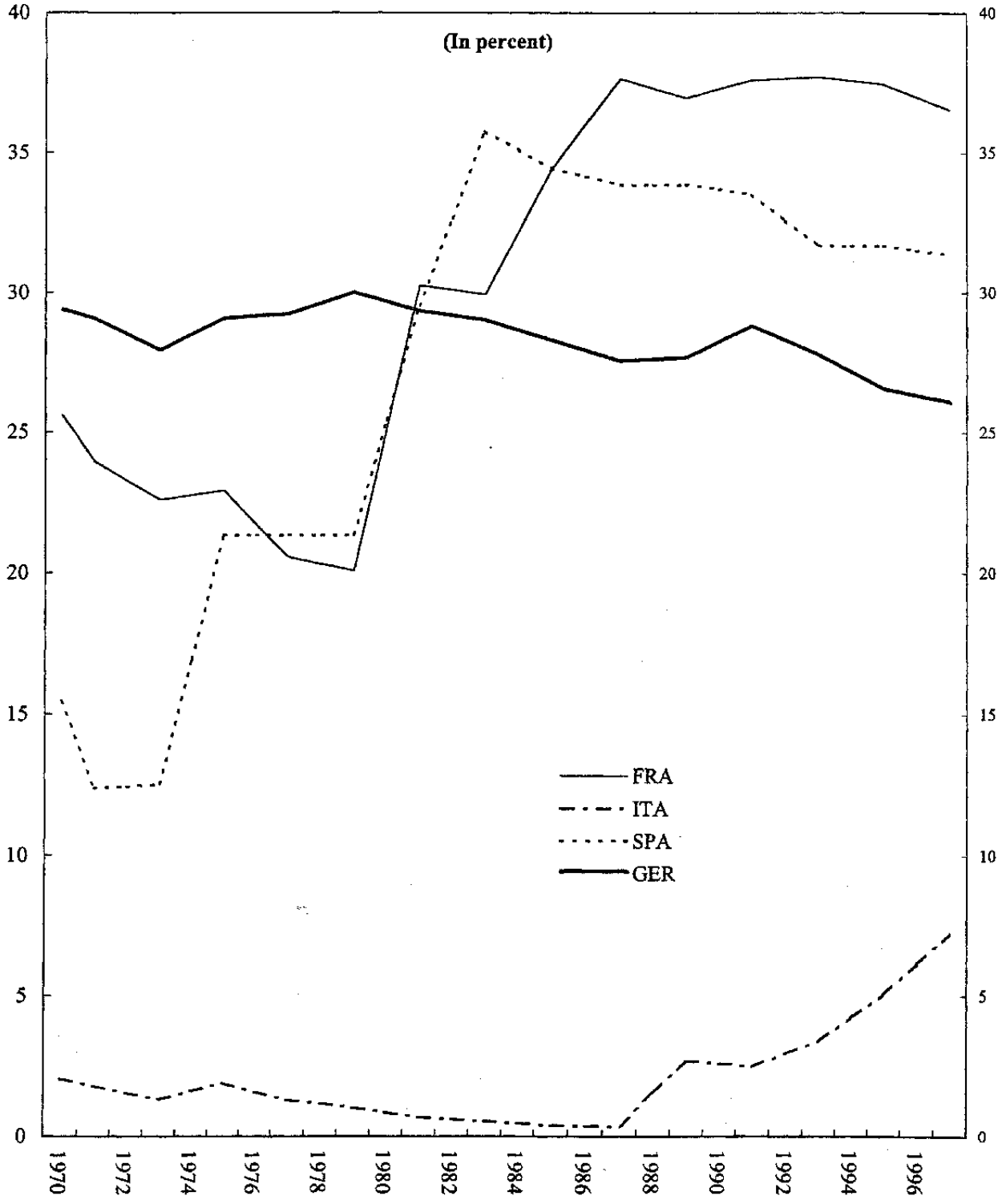
Sources: IMF staff calculations; and OECD Analytical Database.

Figure III.7. Selected Countries: Shift of the Wage Curve, 1970-2000



Sources: IMF staff calculations; and OECD Analytical Database.

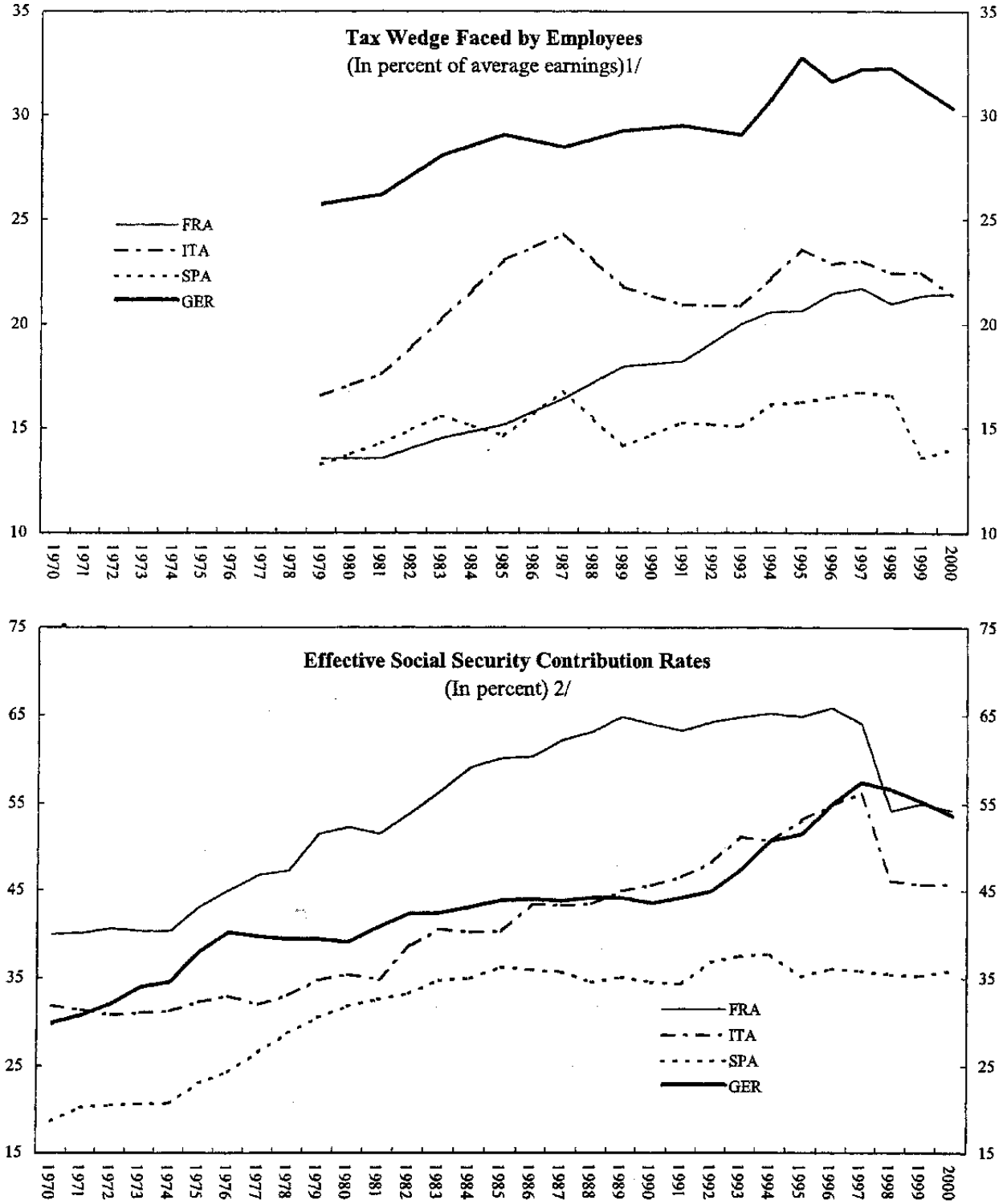
Figure III.8. Selected Countries: Gross Unemployment Benefit Replacement Ratio, 1970-1997 1/



Source: OECD tax and benefits database.

1/ Data plotted refer to the simple average of replacement ratios applicable to different demographic groups and different unemployment durations.

Figure III.9. Selected Countries: Labor Taxation, 1970-2000

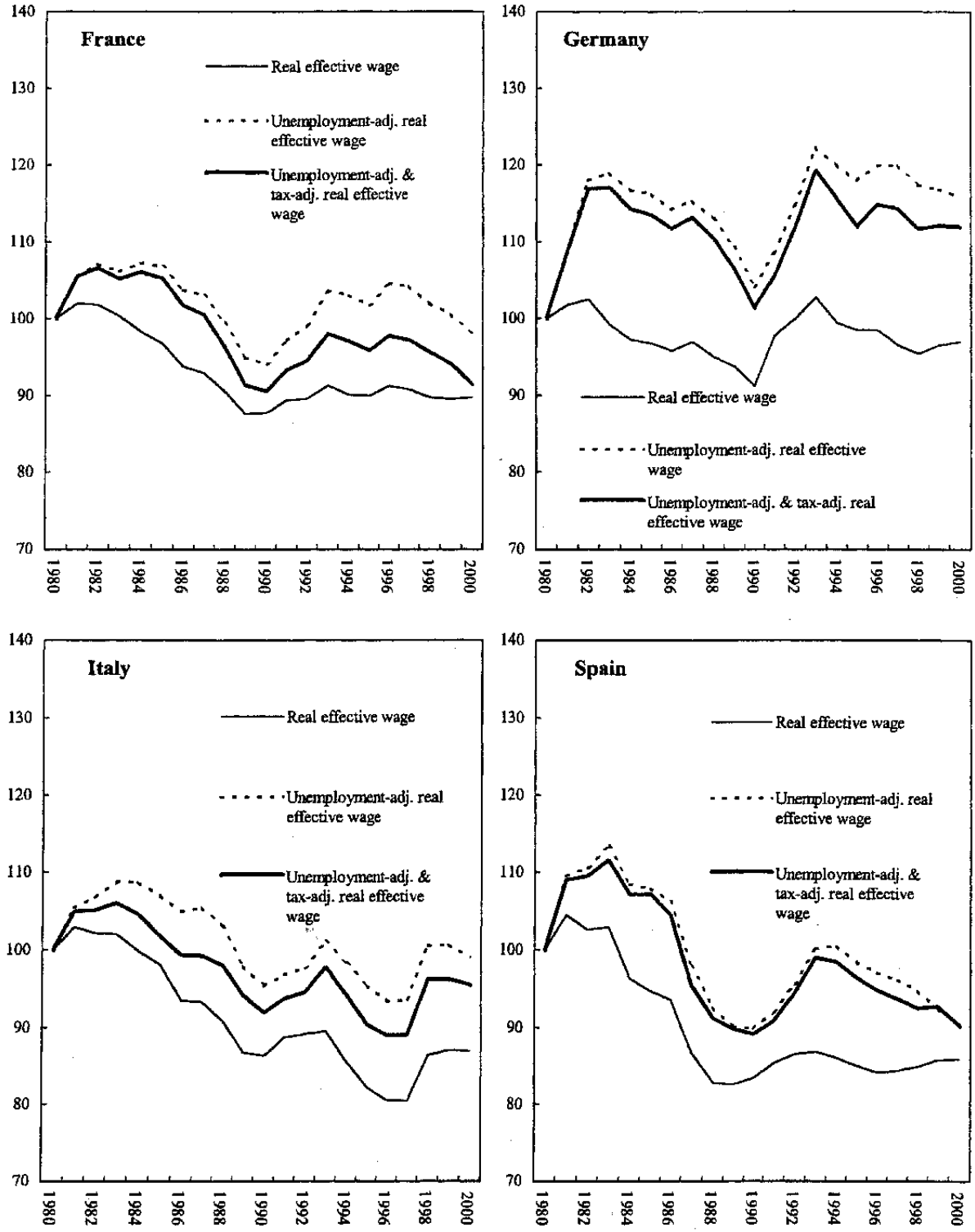


Sources: OECD Economic Outlook Database and 2EAPWHIS.ivt Database; and IMF staff calculations.

1/ Average of rates for single and married employees; wedge includes income tax, employees' social security contributions and cash benefits (as a negative entry).

2/ Total social security collections as percent of total employee compensation minus social security collections.

Figure III.10. Selected Countries: Gauging Underlying Wage Moderation, 1980-2000 1/
(1980=100)



Sources: IMF staff calculations; OECD Analytical Database and 2EAPWHIS.ivt Database.

1/ All wage data refers to hourly wages.

Estimating the Wage Curve

139. **The slope of wage curves has been estimated in numerous contributions to the literature and is estimated here with regional data of the four countries of this study.** Specifically, the following equation based on equation (7) of Box III.1 is estimated:

$$\omega = \delta_0 + \delta_1 u \tag{8}$$

$$where\ \delta_0 = \delta_0(u^*, m, C, C_u), \delta_1 = \delta_1(u^*, m, C, C_u)$$

The methodology is similar to that of Blanchflower and Oswald (1994). In fitting the equation, assuming labor-augmenting technological progress,[67] real wages W must be adjusted for labor productivity growth. Typically this equation is fitted to the data with u standing for the natural logarithm of the unemployment rate; here the equation is also fitted with u standing for the raw unemployment rate.[68]

140. **Blanchflower and Oswald (1995) investigate the relation between real wages and unemployment for various countries**, including Italy among those reviewed here. Using broadly comparable microeconomic data, they estimate a cross (individual)-sectional earnings equation for each country, in which, together with the a set of control variables,[69] the regional unemployment rate is entered as an explanatory variable. They demonstrate that there appears to be an empirical regularity in international pay and unemployment data, whereby estimates of the unemployment elasticity of pay (i.e., δ_1) cluster around –0.1.

141. **This paper estimates the wage curve with regional national accounts data on labor costs and labor force survey data on regional unemployment rates**, using the following setup:

$$\omega_{it} = \delta_{i0} + \delta_{1it} u_{it} + \delta_2 \omega_{it-1} + \vartheta_{it}$$

---

[67] This assumption ensures the existence of a well-specified, steady-state growth path, with an unchanged capital-output ratio. See, for example, Romer (1996).

[68] When estimating wage curves from unemployment and wage data parameter estimates are typically distorted if wage curves shifts between observations. Across regions, however, wage curves should be more stable than labor demand curves, thus limiting the distortion when using regional data. Moreover, estimates derived here are simular to results found by the literature and all conclusions of this study are not very sensitive to the exact maginitude of parameters.

[69] These variables include dummies for the industry and region in which a worker is employed; his or her gender, marital status, experience, schooling, rank, and union status. The countries include the United States, Canada, Austria, Italy, the Netherlands, Switzerland, and Norway.

$$w_{it} = \gamma_{i0} + \gamma_1 u_{it} + \gamma_2 w_{it-1} + \rho_{it}$$

where ω denotes the unit labor cost,[70] u the unemployment rate (or the natural logarithm thereof), and w real compensation per employee. These regressions are fitted to EUROSTAT NUTS2 regional data for a total of i=53 regions, including 17 regions in Spain, 16 in Germany, and 20 in Italy. Regional labor cost data for France are not available in EUROSTAT.[71] The time series span 1983-95 for Spain, 1983-1998 for Italy, and 1991-1999 for Germany. The regression set-up allows for region-specific intercepts (fixed effects) and thus for region-specific equilibrium rates of unemployment or region-specific real effective wages: both theoretical arguments and empirical evidence support the existence of stable, region-specific natural rates of unemployment.[72] And, by introducing a lagged dependent variable, it allows for equilibrium real wages adjusting gradually to shocks. Notice, though, that the regression assumes constant parameters across time and is therefore a simplified, dynamic version of the wage equation (7) in Box III.1.

142. **The model specification is similar to that used elsewhere in the literature.** It resembles closely the models fitted to data by Layard, Nickell, and Jackman (1991) as well as by Blanchard and Katz (1997) for the U.K. regions and U.S. states.[73] But unlike these studies, data on regional productivity and GDP deflators allow the computation of productivity adjusted real compensation, or unit labor costs: a wage curve should be estimated using productivity adjusted real compensation because there should be no relation between productivity and unemployment rates in the long run. To have comparable results, the regressions were also run using real compensation unadjusted for productivity. Moreover, all regressions were run by instrumenting for the dependent variable on the right-hand side with the same variable lagged twice, to address the endogeneity of the regressors.[74]

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[70] Data to compute total factor productivity are only available for a subset of the regions considered here.

[71] See Estevão and Nargis (2001) for estimates of the wage curve for France using individual-level data from 1990 to 2000.

[72] See, for example, Blanchard and Katz (1992) for evidence on the United States, and Decressin and Fatás (1995), as well as Mauro and others (1998) for Europe.

[73] Blanchard and Katz ran the regressions with nominal wages rather than real wages and did not adjust for productivity because data on prices and regional output were not available. Accordingly, they included time-specific fixed effects, effectively assuming that price and productivity developments are very similar across individual states.

[74] See, for example, Hsiao (1986). The bias in the estimates as a result of introducing a lagged dependent variable in a set-up allowing for fixed effects declines rapidly with the time length of the sample.

Regression of Regional Labor Costs on Unemployment Rates

	ULC			W/P		
	δ_1	δ_2	R^2	γ_1	γ_2	R^2
Levels	-0.3811 *	0.8074 *	0.94	-0.1364 *	0.8697 *	0.99
	(0.045)	(0.030)		(0.052)	(0.024)	
Instrumented	-0.4024 *	0.8186 *	0.94	-0.1543	0.8685 *	0.99
	(0.046)	(0.038)		(0.051)	(0.019)	
Log levels	-0.049 *	0.813 *	0.93	-0.0238 *	0.868 *	0.99
	(0.005)	(0.030)		(0.005)	(0.024)	
Instrumented	-0.0537 *	0.8214 *	0.93	-0.0259	0.8691 *	0.99
	(0.006)	(0.039)		(0.005)	(0.018)	

Sources: EUROSTAT; national authorities; and IMF staff calculations.

Note: Standard errors in parentheses. A * indicates significance at a 5 percent level.

143. **The results suggest a lower short-run but higher long-run elasticity of labor costs with respect to the unemployment rate than in Blanchflower and Oswald (1995).** The short-run elasticity is estimated at about 0.05 in the ω (ULC) equation and 0.025 in the *w* (real compensation) equation or, respectively, at one half or one quarter of the 0.1 elasticity found by Blanchflower and Oswald. The long-run elasticities amount, respectively, to 0.25 and 0.18. Furthermore, the adjustment of labor costs (particularly of compensation) in response to shocks is slow, as evidenced by coefficient estimates on the lagged dependent variables which are between 0.8-0.9: following a shock, it takes about five years to complete half of the adjustment to the new equilibrium. Blanchflower and Oswald do not find a significant estimate for the lagged dependent variable, unlike here and in other studies.[75] The results from the specification with the unemployment rate in levels rather than logarithms are virtually identical: they suggest a short-run semi-elasticity of 0.4 and a long-run semi-elasticity of 2: note that with an average rate of unemployment of 10 percent, this finding is equivalent to the raw elasticities of 0.05 of 0.2 found with the logarithm specification. For all further analysis, this paper works with the elasticity of 0.2, but key results are also checked with an elasticity of 0.1, as found by Blanchflower and Oswald.

[75] Blanchard and Katz (1997), after adjusting for specific features of the micro data of Blanchflower and Oswald, also find significant and sizeable estimates for the coefficient on the lagged dependent variable; their results with micro data on individuals were then similar to those that they obtain with macro data. Estevão and Nargis (2001) also find a significant coefficient for lagged wages in wage curve estimates for France.

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INTERNATIONAL MONETARY FUND

SELECTED EURO-AREA COUNTRIES

Rules-Based Fiscal Policy in France, Germany, Italy, and Spain
Supplementary Information

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Approved by the European I Department

October 3, 2001

Contents Page

I. A Survey of the Political Literature on Fiscal Policy and Fiscal Rules[1]

1. This chapter provides a brief survey of political economy arguments that explain deviations of fiscal policy conduct from a socially optimal benchmark.[2] The first key question is, of course, what is the "optimal" conduct of fiscal policy—that is, what is the appropriate benchmark. The neoclassical theory of fiscal policy (see Barro, 1979, 1989; Lucas and Stokey, 1983; Lucas, 1986) stresses the importance of achieving tax smoothing; budget deficits should be used to cover temporary increases in government spending (such as, for example, those due to a war) while tax rates should be kept constant to minimize distortions.[3] This generally implies that the budget will be countercyclical. Keynesian models of aggregate demand management stress the importance of fiscal policy as a stabilizer: fiscal policy should be expansionary during recessions and contractionary during expansions in order to moderate business cycle fluctuations.

A. Fiscal Policy Biases

2. The political economy literature provides possible explanations as to why governments may systematically deviate from these principles of fiscal policy. We divide theoretical arguments into those implying a bias towards budget deficits, and those implying a bias towards excess public spending. As we shall see, there is overlap between the two categories, since excess budget deficits can clearly be due to excess public spending.

Budget deficits

3. Alesina and Perotti (1995) provide a useful classification of political economy models of fiscal policy. We shall focus primarily on three types of models: (i) models based on "fiscal illusion" with opportunistic policymakers and naive voters; (ii) models of debt as a strategic variable; and (iii) models of distributional conflict.

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[1] Prepared by Gian Maria Milesi-Ferretti.

[2] In particular, it draws on Alesina and Perotti (1995), Drazen (2000) and Milesi-Ferretti (1997).

[3] The neoclassical theory of fiscal policy can offer precise normative insights under the maintained assumption that distributional considerations can be addressed by lump-sum transfers. In reality, however, fiscal policies are used to redistribute resources across heterogeneous political groups and individuals, raising the question of how to define an appropriate benchmark of "virtuous" fiscal behavior. Clearly this is an open question, but for the purpose of this chapter we shall take as given the desirability of reducing fiscal imbalances.

4. The first class of models is in the spirit of the public choice literature: the key assumptions are that policy makers are opportunistic (that is, they care about electoral prospects, and not directly about private agents' welfare) and use fiscal deficits to increase their electoral chances. Voters fail to understand the intertemporal budget constraint of the government—they overestimate the benefit of current expenditures and/or underestimate future tax burdens—and therefore do not "punish" politicians for fiscally irresponsible behavior. In this context, fiscal rules would be beneficial, because they would constrain such fiscally irresponsible behavior.

5. The second strand of literature emphasizes that the stock of debt has an effect on the policy choices of future governments, and can therefore be used to constrain its actions (Alesina and Tabellini, 1990; Tabellini and Alesina, 1990). In this context, a deficit bias can arise because different political parties, which face electoral uncertainty, have conflicting spending priorities. These factors imply that the current government does not fully internalize the cost of running budget deficits today, because the future spending that is going to be compressed may reflect the priorities of a different government. This deficit bias is increasing in the degree of political polarization (reflected in the difference between spending priorities) and in the degree of electoral uncertainty.[4] In this class of models, parties before an election would agree on a balanced budget rule, but after the election the party in power prefers "discretion."

6. A third strand of literature shows how conflict between different social groups (represented by parties, interest groups, coalition members) can delay the adoption of necessary policy measures, such as, for example, spending cuts or tax increases to stem growth in public indebtedness caused by some exogenous factor (Alesina and Drazen (1991); Drazen and Grilli (1993)). Delays occur because groups cannot agree on burden-sharing for the necessary fiscal adjustment. These models predict that fragmented or divided governments and polarized societies would have more difficulty implementing fiscal adjustment than single-party governments and less polarized societies. Evidence presented in Roubini and Sachs (1989) and Grilli, Masciandaro and Tabellini (1991) for OECD countries and by Poterba (1994) and Alt and Lowry (1994) for U.S. states is consistent with these predictions.

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[4] A different, but related argument is made by Lizzeri (1999) in a game-theoretic model of redistributive politics. Uncertainty about the outcome of future elections implies that voters cannot predict whether politicians will in the future choose to redistribute resources to them. Voters are therefore favorable to politicians that promise them large current transfers, financing current expenditure through borrowing.

Public spending

7. A number of contributions closer to the political science literature study the overprovision of public projects ("pork-barrel spending") that can arise, for example, when programs have concentrated benefits and diffuse costs. One important factor in this strand of literature is the interaction between the organization of legislatures and fiscal decisions. In particular, one strand of the literature stresses the bias towards excess spending that can arise when representatives of geographically-based constituencies fail to fully internalize the financing costs of projects yielding benefits to their constituency, because these costs are borne by taxpayers as a whole (see, for example, Weingast, Shepsle and Johansen (1981)).[5] Whether the spending bias will indeed cause excess spending depends on the rules that determine which projects will actually be undertaken; in the simplest case, in which each policymaker decides on the level of spending in his/her district and taxes are determined so as to balance the budget, the result will be a level of spending and taxation which is too high from society's point of view.[6]

8. These models can be applied to the determination of public spending within a government, where each "spending" minister fails to fully internalize the costs that the higher taxes needed to finance spending impose on society at large (see, for example, von Hagen and Harden (1996)). The bias is stronger the more decentralized the decision system is, because of the existence of a common pool problem (everybody has to pay taxes, but only specific ministries and their constituents benefit from the spending). Kontopoulos and Perotti (1999) present evidence that countries with a larger number of spending ministers tend to have higher public spending. Finally, the model can be applied to spending decisions within a government *coalition*, implying that control on spending is more difficult the larger the number of parties in the coalition.

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[5] In Weingast, Shepsle and Johansen (1981) projects also bring political benefits to the district in which they are undertaken.

[6] When spending decisions do not entail approval for all projects (as is the case, for example, when a minimum winning coalition decides on the projects to be undertaken), results are ambiguous and depend on the voting rule. In a dynamic setting, similar considerations can give rise to "excessive" fiscal deficits. Velasco (1999) emphasizes the bias in fiscal policy arising when government resources are "common property;" the tendency to run budget deficits arises because each group perceives the return on public savings to be too low, because the rate of return is adjusted by what other groups will appropriate. This enhances the tendency to overspend. Chari and Cole (1993a) show that a deficit bias can arise in the presence of political uncertainty, because accumulated government debt reduces the bias towards excess government spending, in a fashion similar to Persson and Svensson (1989) and Alesina and Tabellini (1990).

B. Implications for Fiscal Frameworks

9. The existence of "biases" in the conduct of discretionary fiscal policy is a possible justification for the imposition of fiscal rules.[7] In principle, the ideal rule would be state-contingent, so as to allow the authorities sufficient flexibility to react to shocks while at the same time removing any inherent bias towards excess fiscal imbalances. However, there is a view that rules have to be simple in order to be verifiable, and that contingent rules would leave the door open to manipulation. If rules are not state-contingent, a critical trade-off arises between the elimination of a policy bias and the need to retain policy flexibility, as in the literature on rules versus discretion in monetary policy formation (Kydland and Prescott (1977); Barro and Gordon (1983)).[8]

10. Corsetti and Roubini (1997) explore these issues more formally. They present a simple model that extends Alesina and Tabellini (1990) in order to highlight the trade-off between deficit bias and margin for stabilization in the context of a closed and open economy. They first consider whether leaving the government a margin for stabilization policy (modeled as a "tax smoothing" role) contributes to worsening the deficit bias. They conclude that this is not the case. An interesting result they obtain is that the political deficit bias is enhanced in an open economy. Since in their model there is no default risk, in an open economy the government faces an infinitely elastic supply of funds at the given world interest rate, contrary to the case in a closed economy. This implies that additional borrowing to finance more expenditure is not discouraged by higher interest costs.[9] Clearly, the scope

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[7] Some studies have examined the impact of rules in the absence of any underlying distortion in the conduct of fiscal policy. For example, Schmitt-Grohé and Uribe (1997) show that in a neoclassical growth model a balanced budget rule can make expectations of higher tax rates self-fulfilling if the fiscal authority relies on changes in labor income tax rates to balance the budget. This happens because the expectation of high tax rates lowers labor supply and therefore output, forcing tax rates to be raised to balance the budget.

[8] In the context of monetary policy, an inflation bias can result from a credibility problem in the relation between the policy maker and the private sector. In the case of fiscal rules, instead, the relevant bias, as we have seen, can be determined by political and distributional factors; problems of time consistency can arise because current and future governments may have different preferences over social outcomes. Expectations over future electoral outcomes play an important role in shaping both policy decisions and voters' electoral choices.

[9] This point was often considered in the context of the Maastricht debate. Indeed, the move towards a common currency lowered borrowing costs for high-debt countries by removing inflation and exchange rate risk premia on interest rates. However, Bayoumi, Goldstein and Woglom (1995) find that U.S. states face a steeply rising supply curve for credit.

for fiscal rules depends on the relative intensity of the deficit bias and the need for tax smoothing.[10]

11. Dur *et al.* (1997) show that a fiscal rule, imposed to address a deficit bias problem, may have undesirable effects on the composition of public spending, leading to a suboptimally low level of public investment.

12. A number of studies examine the rationale for fiscal rules in a monetary union. Chari and Kehoe (1997) argue that fiscal constraints in a monetary union can be desirable if no monetary policy commitment is possible. The reason is that national fiscal authorities take into account the incentive of the central bank to partially monetize debt, but do not internalize the costs of induced inflation on other member states. Beetsma and Uhlig (1997) study the rationale for a "stability pact" limiting fiscal imbalances in a monetary union, using a model in which politicians have a deficit bias and there is an incentive to erode debt through unexpected inflation.

13. The models of spending bias described in the previous section highlight how budgetary institutions can have an impact on fiscal outcomes—for example, the spending bias can be reduced by a strong finance minister with agenda-setting powers, by negotiated spending targets for each ministry, or by setting an overall spending ceiling. Indeed, imposing a binding aggregate spending constraint forces agents bargaining over spending to fully internalize the resource cost of their spending bids.

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[10] The nature of the trade-off between flexibility and deficit bias is apparent in some of the empirical work on the link between statutory fiscal restraints and budgetary outcomes within U.S. states. ACIR (1987) and von Hagen (1991), among others, find that states with such restraints run smaller budget deficits, while Bayoumi and Eichengreen (1995) find that the counter-cyclical responsiveness of state budgets is significantly reduced by more stringent balanced budget rules.

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II. Fiscal Rules: Experience of a Selected Group of Countries[11]

14. This chapter describes the experience with fiscal rules in Australia, Canada, Finland, the Netherlands, New Zealand, Sweden, Switzerland, the United Kingdom, and the United States. For each country, the context in which the rules were adopted, their objectives, their institutional basis, will be reviewed, and an evaluation of the performance of the rules will be attempted where possible. A broad definition of fiscal rules is adopted in order to cover both countries that established specific multiyear numerical targets as their objectives (as in the case of deficit, debt or expenditure rules) and countries that specify principles according to which the fiscal policy should be conducted.

Australia

Background

15. Poor fiscal performance for more than two decades, which led to a marked build up in public debt, prompted the Australian authorities to adopt a new fiscal policy framework in the mid-1990s. The Charter of Budget Honesty Act (BHA), broadly similar to New Zealand's Fiscal Responsibility Act, was set out in 1996 and enacted by Parliament in 1998, and was aimed at enhancing fiscal discipline and raising public scrutiny of fiscal policy.

The Institutional Arrangement

16. Under the BHA, the Commonwealth (federal) government must lay out its short-term fiscal objectives and targets as well as its medium-term strategy in each annual budget. In doing so, the BHA establishes general principles for formulating fiscal policy on a sound basis and requires that governments be more explicit about their fiscal policy intentions and present comprehensive information on fiscal developments. Short-term fiscal targets are established in the budget law, but should be consistent with the principles determined by the BHA, particularly the principle of fiscal balance over the course of the economic cycle.

Objectives

17. The objective of the BHA is to improve fiscal policy outcomes by requiring the government's fiscal strategy to be based on principles of sound fiscal management and by facilitating public scrutiny of fiscal policy and performance. Moreover, the BHA establishes that the government's fiscal policy is to be directed at maintaining economic prosperity in a sustainable medium-term framework.[12]

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[11] This chapter was prepared by Enrica Detragiache and Gabriel Di Bella.

[12] The Australian population is relatively young and therefore population aging is not a important concern compared to other OECD countries.

Characteristics

18. Under the BHA, the government's fiscal strategy is to be based on the following principles: first, financial risks must be managed prudently, including to maintain the general government debt at prudent levels; second, fiscal policy should help achieve adequate national saving and moderate cyclical fluctuations in economic activity, taking account the economic risks and the impact of those risks on the fiscal position; third, spending and taxing policies should be consistent with a reasonable degree of stability and predictability in the level of the tax burden; fourth, the integrity of the tax system should be maintained; and fifth, policy decisions should be fair from an intergenerational point of view.[13]

19. The Act also contains provisions for the publication of several fiscal reports. The government is required to release a "Fiscal Strategy Statement (FSS)" at or before the time of the first budget. The FSS is intended to increase public awareness the fiscal strategy and to establish a benchmark for evaluating the conduct of the fiscal strategy. Additionally, the Act requires the government to release a "Budget Economic and Fiscal Outlook (BEFO)" report, a "Mid-year Economic and Fiscal Outlook (MYEFO)" report, and a Final Budget Outcome (FBO) report. The Treasurer is also to publicly release an intergenerational report every five years to assess the long-term sustainability of government policies for the next 40 years, including the financial implications of demographic change. To increase the transparency of the budget process in electoral times, the government must publish a "Pre-election Economic and Fiscal Outlook" report. In addition, the Prime Minister or the leader of the opposition can request that the administration provide cost estimates for their electoral plans.

20. The BHA does not specify any particular numerical target, but it requires the government to set its operational targets on a 3-year basis and publish them in the FSS. The 1999–2000 budget, which introduced accrual budgeting, contains the following short-term objectives: to maintain fiscal surpluses over the three-year projection period; to reduce the ratio of federal net debt to GDP to 10 percent in 2000–01; not to increase the tax burden; and to improve the federal net asset position over the medium and long term.

Evaluation

21. The new framework contributed to a significant turnaround in the federal fiscal position, which shifted from a deficit of about 4 percent of GDP (on a cash basis) in 1992–93

[13] The financial risks identified by the Charter include those arising from excessive net debt, commercial risks arising from ownership of public trading enterprises and public financial enterprises, risks arising from erosion of the tax base and from the management of assets and liabilities.

to a surplus of 2 percent of GDP in 1999–00.[14] Spending has increased only slightly and tax burden has remained constant. Moreover, transparency has improved due to the new reporting requirements established in the BHA.

Canada

Background

22. In Canada, federal government debt fluctuated around 35-40 percent of GDP in the 1980s, but the decline in economic growth during the early 1990s led to dramatic increases in the deficit, which reached around 6 percent of GDP in 1993. By 1994 debt reached 70 percent of GDP. The authorities responded through legislated spending restraint beginning in 1992.

The Institutional Arrangement

23. The "Fiscal Spending Control Act (FSCA)"of 1992 established a nominal expenditure limit for the period 1992–96. In addition, since 1994 the government introduced several policy rules which were not formally legislated.

Objectives

24. The main objective of the FSCA was to control public expenditure growth, reduce fiscal imbalances, and stop the increase in public debt. The non-legislated policy rules aimed at minimizing the use of overly-optimistic economic assumptions for budgeting, reducing public debt to cope with population aging costs, increasing the planning horizon for public sector activities, and improving the transparency of public operations.

Characteristics

25. The FSCA set nominal limits on "Program Spending" (with the exception of self-financing programs) from 1991 to 1995.[15] Program Spending included all public expenditures except those associated with the service of debts, payments of employment insurance, expenditures related with the "Farmer Protection Act," and those arising from emergencies and payments in satisfaction of judgments of Courts against the government. The expenditure limits were legislated and therefore binding by law; therefore the government was not allowed to present a budget proposal inconsistent with the expenditure

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[14] The fiscal year runs from July 1 to June 30.

[15] The FSCA in its article 10 established that by 1994 Parliament should consider extending the law. As legislation was not deemed necessary to further control spending, the act was not extended beyond 1995.

limits in the FSCA. Overspending in one year could be offset in the following two years, including the final year stipulated in the law. Additionally, spending could be increased in a given year if there were unexpected revenues, or if spending in the previous year had been under the limit.

26. Parallel to the FSCA, the government introduced a set of non-legislated policy rules that complemented and enhanced the spending limit imposed by the law. The practice of basing budget planning on economic assumptions that are consistently more cautious than private sector forecasts was introduced in 1994. Furthermore, two-year rolling deficit targets were adopted with the goal of balancing the budget and, as part of a pre-budget consultation process, mid-year fiscal updates describing deficit targets and revised economic assumption began to be published. In 1995, an annual "Contingency Reserve" to finance forecasting errors and unpredictable events was created. If not needed, the reserve would be used to pay down the debt, as it was indeed the case. In 1998, the government committed to follow a debt repayment plan implying balanced budgets in the following two years (in the event, surpluses were achieved).

27. In 2000, the government announced a new element to its debt repayment plan. In addition to setting aside a contingency reserve, each fall it would announce whether more of that year's surplus would be devoted to debt reduction than anticipated in the budget. In addition, in the future the effect of "prudent assumptions" on budget projections would be identified explicitly in order to facilitate the evaluation of the fiscal strategy. This implies that the public budget starts by establishing the amount of economic prudence required to cushion against potential pressures on government finances (such as higher-than-expected interest rates or lower-than-forecast growth), which helps to ensure that the government meet its commitment to balanced budgets.[16] Finally, the government announced its intention to move toward full accrual accounting in the budget and, in 2001, announced that its final audited financial statements for 2001–02 will be presented on a full accrual basis.

Evaluation

28. The FSCA was successful; actual spending remained within the limits in all years, except 1993, when overspending compensated the under-spending in the preceding fiscal year. Furthermore, the deficit of 5 percent of GDP in 1995 became a surplus of more than 1 percent of GDP by 1999. Although part of this improvement is cyclically based, most of it reflects structural gains. Additionally, the ratio of net public net to GDP was reduced from around 70 percent in 1995 to 52 percent in 2000.

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[16] For the 2000, budget prudence has been set at $1 billion in 2000–01 and $2 billion in 2001–02, as in the 1999 Economic and Fiscal Update.

Finland

Background

29. As a consequence of a severe recession and a banking crisis in the early 1990s, Finland's fiscal accounts deteriorated markedly. From levels of public expenditures of around 30 percent of GDP in the 1970s and of 45 percent of GDP in the middle 1980s, this ratio increased to around 60 percent in the early 1990s because of increases in welfare expenditures and of bank support programs. Tax receipts did not keep pace with spending increases, causing substantial deficits that peaked in 1993 with an imbalance of over 7 percent of GDP. The public debt ratio quadrupled in 1990–93, going from about 14 percent to about 56 percent of GDP. Forced by the evolution of the public accounts, a cabinet accord was reached to improve the public finances.

The Institutional Arrangement

30. The fiscal rule is a political understanding endorsed by the cabinet but not by Parliament. As a result, only the first year of the multiyear program is legally binding, as it is reflected in the yearly budget law. In 1995, the new government extended the practices established in 1991, but it changed the planning horizon from 3 to 4 years. In 1999, the government coalition that had ruled the country since 1995 was re-elected, and a new extension of the agreement was reached.

Objectives

31. The original agreement had as its main objective the reduction of the public deficit and the debt. The 1999 agreement extended the original objectives to include tax reduction. Other objectives stated in the budget laws are to increase the autonomy of spending departments, improve the transparency and simplicity of public sector operations, maintain deficits and public debt ratios consistent with the Maastricht Treaty and the SGP, and gradually prepare the public finances for population aging.[17] The 1999 agreement established the objective to keep the expenditure of the central government fixed in real terms at its 1999 level.

Characteristics

32. The basic fiscal rule is a multiyear expenditure ceiling on total central government spending measured in constant prices of the budget year, with a rolling 4-year horizon. This rule is complemented with a balanced budget rule for autonomous local governments and by

[17] Short-term economic stabilization is not a specific objective, although the government has established that tax reductions have to be implemented taking into consideration the position of the economy in the business cycle.

strong regulation of the privately managed social security funds. The real expenditure ceilings are set not only for total expenditure of the public sector but also for each ministry and are binding, although supplementary budgets have been used on occasion to dispose of privatization revenues resulting in minor deviations from the ceilings. Unemployment benefits, transfers to local governments and social security funds as well as interest on public debt are included in the expenditure aggregate.

33. There is no contingency reserve in case of differences between ex-ante projections and ex-post outcomes. The expenditure ceiling must be met ex post, but projections for the remaining years can be adjusted to reflect unexpected changes in the economic scenario. To facilitate expenditure management, the introduction of the rules was accompanied by a move from line-item budgeting to lump-sum appropriations. To avoid inefficient spending of appropriations not used at the end of the year, transfers to the following year are allowed. The expenditure ceilings are projected in real terms and then converted to nominal terms at the time of the budget using specific price and cost deflators. Finally, performance targets are developed between ministries and their agencies to improve service provision. Ex-post controls and auditing of spending budgets were also strengthened.

Evaluation

34. Since the introduction of the expenditure restraints in 1991, the central government has been able to keep its primary spending around its 1992 real levels, resulting in a decline in the ratio of public expenditures to GDP from almost 60 percent in 1993 to around 45 percent in 2000. The fiscal deficit decreased from its peak in 1993 to 1.6 percent in 1997 and turned to consistent surpluses beginning in 1998. The debt to GDP ratio was stabilized and began to decrease after 1994. It is estimated that approximately 70 percent of this improvement was due to structural rather than cyclical factors (IMF, 1999). Although the main expenditure reductions were in transfers to private sector and in public consumption, public investment suffered a more noticeable reduction in relative terms.

The Netherlands

Background

35. The Netherlands has a long history of carefully planned fiscal policy. As early as the 1960s, the Dutch government adopted a "Structural Fiscal Policy," that related public expenditures and the budget balance to the size of potential GDP. Budgetary policy was mainly based on the principle that the budget deficit should be constant as proportion of trend GDP.[18] The system performed well until the early 1970s, when unrealistic forecasts about trend GDP increased expenditures far beyond the level of actual revenues, resulting in a

[18] In the context of this discussion potential and trend GDP are considered equivalent concepts.

substantial increase in the fiscal deficit. By 1982, the general government deficit was around 7 percent of GDP. Forced by this situation, the government abandoned the previous fiscal policy and adopted one based on a multiyear deficit reduction target. The new policy however, was strongly pro-cyclical, and the deficit reduction path had to be revised often. In spite of these drawbacks, the fiscal deficit returned to more sustainable levels.

36. In 1994, the administration of Prime Minister Kok returned to a type of structural fiscal policy, though with a number of important differences. This fiscal framework (also denominated "Trend Fiscal Policy") established medium-term ceilings for government expenditures and rules for the disposition of revenue shortfalls or overruns.[19] In 1998, the second Kok administration continued with the approach, but introduced some modifications.

The Institutional Arrangement

37. The "Trend Based Fiscal Policy" established in 1994 was the result of a political agreement among the three parties forming the first Kok coalition for the four years of the legislature. The coalition is committed to implement the rules as established. As in Finland, the only ceilings that are legally binding are those included in the current year budget.

Objectives

38. The fiscal framework adopted in 1994 and continued in 1998 aims at introducing transparent and orderly decision-making in the budgetary process, increasing efficiency in public sector activities and improve financial control of such activities, reducing the ratio of structural government spending to GDP, and permitting a more effective use of the public budget as a counter-cyclical tool in order to stabilize GDP around its potential. Finally, the fiscal framework is intended to strengthen the budgetary process.

Characteristics

39. The budgetary framework of 1994 established specific expenditure ceilings in constant prices for central government spending, social security, and healthcare on a 4-year basis based on cautious economic assumptions (i.e., a projection of real GDP growth of 2.25 percent, which is below trend growth during the last 15 years).[20] The cautious

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[19] In introducing this budgetary policy, the minister of finance followed the advice of the "Study Group of Budgetary Margin," which is composed by the highest-rank civil servants of the financial and economic ministries, an executive director of the Central Bank and the director of the Netherlands Bureau For Economic Policy Analysis. This group also devised the fiscal policy followed by The Netherlands during the 1960s and 1970s.

[20]Central government spending includes interest on public debt and excludes local government spending and a fund for infrastructure investment. In addition, it is net of non-tax and non-premium revenues.

assumptions implied that the probability of windfalls was greater than the probability of setbacks, which facilitated an orderly execution of the budget. In addition to the ceilings, the agreement established that expenditure overruns had to be redressed within the spending category in which the excess occurred. In the case of lower than planned expenditures, the difference had to be used to reduce the public deficit and/or taxes. Non-recurrent revenues, such as those generated by privatization, were excluded. Revenue windfalls or setbacks could be absorbed by the deficit, thus allowing for the operation of automatic stabilizers, or used for tax cuts.

40. The 1998 coalition agreement introduced the following new provisions. On the expenditure side, it allowed expenditure undershoots in one category to be used to cover overruns elsewhere, but only after a cabinet vote. A small expenditure reserve (of 0.25 percent of budgeted expenditure) was created to cover public sector wage bill overruns as well as to carry over spending across periods (i.e., spending can be advanced from or postponed to the following year in an amount equal to that percentage). In addition, another small reserve was established to face unforeseen expenditures. On the revenue side, if the budget deficit was less than 0.75 percent of GDP, half of the revenue overshoot had to be used to reduce the deficit and half to cut taxes, while if the budget deficit exceeded 0.75 percent of GDP, 75 percent of the excess had to be used to reduce deficit and the rest to cut taxes. In the case of revenues undershoots and if the budget deficit was larger than 2.25 percent of GDP, half of the undershoot would go to the deficit and the other half would be covered with higher taxes. Finally, if the budget deficit was lower than 2.25 percent of GDP, the percentages would be changed to 75 percent and 25 percent respectively.

41. As an implementation issue, when a new budget is drawn-up the estimated revenue is compared with the forecasts made at the time of the coalition agreement. This comparison indicates, for a given year, the extent of overshoots or setbacks. The situation is not reviewed during the course of the year. If there are differences with ex-ante estimations, such differences go entirely to the fiscal result. The provisions on the revenue side make clear one of the central aspects of the Dutch budgetary framework, i.e., the strict separation of expenditure and revenue planning and therefore the intended impossibility for revenue windfalls or setbacks to generate changes in expenditures.[21] Since the expenditure ceilings are expressed in constant prices, the projected GDP deflator is used to convert them into nominal amounts. There is a mid-year Supplementary Budget that allows for a last adjustment in the projected GDP deflator. After that, changes in the GDP deflator are not reflected in nominal spending ceilings.

[21] This is known in The Netherlands as the "Zalm rule," after the Finance Minister of the two Kok governments.

Evaluation

42. Under the budget framework established by the two Kok administrations Dutch public accounts improved substantially, and both public spending and the tax burden were reduced. The fiscal deficit of 4.2 percent of GDP in 1995 became a surplus of 1.5 percent of GDP in 2000, while the gross public debt to GDP ratio was reduced to 56.1 percent in 2000 from more than 75 percent in 1995. As in the other countries, however, a favorable position in the business cycle also contributed to these outcomes.

43. The use of a cautious economic scenario and the unexpectedly strong economic growth produced large revenue windfalls during the second Kok administration, which should have resulted in large tax cuts according to the rules. In order not to further stimulate the economy, tax cuts will remain below what would be implied by the rules for the distribution of the revenues windfalls. The spending rules, on the other hand, have remained binding.

New Zealand

Background

44. By and large, fiscal management was orderly in New Zealand during the 1960s and early 1970s. Government expenditure was around 30 percent of GDP and the public budget was close to balance. However, during most of the 1970s and 1980s tax revenues lagged spending growth, with the latter being led by increasing transfers, higher debt service caused by persistent fiscal deficits, and higher interest rates following financial liberalization. By the early 1990s, government spending had reached 40 percent of GDP. Debt peaked at 74.5 percent of GDP in 1987, from levels of around 40 percent of GDP in the mid 1970s. As a consequence of the poor fiscal performance, the New Zealand's debt rating was downgraded in the early 1990s, increasing the cost of financing the continuing fiscal imbalances.

45. In this context, the authorities began a process of institutional reform. First, the government enacted laws that changed the way the public sector was managed from a microeconomic perspective, with the objective of increasing the efficiency in the provision of public services. Second, the autonomy of the Central Bank was guaranteed by law and its main objective, i.e., price stability, was made explicit. Finally, Parliament enacted a law that modified the way public policy was managed from a macroeconomic perspective. The government also established principles, procedures and goals for budget administration.

The Institutional Arrangement

46. The fiscal rules are contained in the "Fiscal Responsibility Act" (FRA) which became effective in July 1994 and was preceded by earlier reforms; these reforms intended to increase the efficiency of the public sector as a provider of services and were contained in the "State-Owned Enterprises Act" of 1986 and the "State Sector Act" of 1988. Both laws

adopted private sector procedures for the management and evaluation of public sector services. Additionally, the "Public Finance Act" of 1989 reformed the budgetary appropriation and reporting process, granting officials chief executive powers and responsibilities in relation to fiscal management and imposing reporting requirements for departments and the government as a whole; it also changed the basis for appropriation from inputs to services (outputs) and from a cash-basis to an accrual basis. It is worth emphasizing that the FRA reflected a process that began well before 1994. The principles contained in the FRA constitute the current guidelines for budget policy in New Zealand.

Objectives

47. The FRA aims at improving fiscal policy by specifying principles of responsible fiscal management and strengthening reporting requirements to achieve more transparent, decision-making by the government. The law also intends to increase accountability by promoting a more informed public debate about fiscal policy, and facilitate the independent assessment of fiscal policies.

Characteristics

48. The FRA's provisions can be grouped in two areas. The first area establishes five principles of responsible fiscal management: to reduce public debt to prudent levels by achieving operating surpluses every year until prudent levels of debt are reached; to maintain public debt at prudent levels by ensuring that, on average, over a reasonable period of time, total operating expenses do not exceed total operating revenues; to achieve levels of public sector net worth that can provide a buffer against adverse future shocks; to prudently manage the risks facing the public sector (i.e., recognize risk and where possible, take steps to manage it); and to pursue policies that are consistent with a reasonable degree of predictability about the level and stability of tax rates for future years; i.e., to avoid surprises about future tax rates.

49. In addition to these principles the FRA requires that two new publications be issued stating the intentions and objectives for fiscal policy: a Budget Policy Statement to be published by the end of March, and a Fiscal Strategy Report to be published at the time of the budget, i.e., around May. The Budget Policy Statement must include the government's broad strategic priorities for the upcoming budget, their fiscal intentions for the next three years and their long-term fiscal policy objectives. The government must also make clear the consistency of its plans and objectives with the principles of responsible fiscal management set out in the FRA. In turn, the Fiscal Strategy Report analyzes the consistency between the economic and fiscal projections included in the budget and the government's short-term fiscal plans set out in the most recently published Budget Policy Statement. Where those plans have changed, the government has to provide an explanation.

50. In addition to the reports on policy intentions (Budget Policy Statement and Fiscal Strategy Report), the FRA requires the publication of a substantial array of fiscal information throughout the year, including an economic and fiscal update for the next three years to be

published on budget night; a half-year economic and fiscal update for the next three years to be published in December; a pre-election economic and fiscal update for the next three years to be published, depending on circumstances, between 42 and 14 days before the date of any general election; and a current-year fiscal update to be published with the Supplementary Estimates, towards the end of each financial year. The reports are to be made using Generally Accepted Accounting Practice principles and on an accrual basis. In the case of differences between ex-ante and ex-post outcomes, the FRA establishes no formal sanctions. The government can depart from the principles but the reasons for the departure and when and how it expects to return to them have to be stated explicitly.

51. In addition to the FRA, non-legislated fiscal practices concerning expenditure management have been introduced. These involve giving spending departments fixed nominal baselines, which can be adjusted for demographic or demand-driven changes. Any new initiatives, or changes to existing initiatives, within the parliamentary cycle (three years) must be met from a fund called Fiscal Provision. Thus, in practice the size of this fund limits new discretionary spending. In the last budget, the government set a three-year Fiscal Provision.

Evaluation

52. New Zealand's fiscal position improved substantially during the 1990s, but the direct contribution of the present fiscal framework has to be weighed against the cyclical improvements. Nevertheless, most estimates indicate a clear shift towards lower structural public deficits during the second half of the 1990s. Furthermore, by requiring all levels of government to be explicit about their short-term intentions and long-term objectives, the FRA has established a more transparent framework for annual budget decisions.

Sweden

Background

53. Fiscal adjustment and the implementation of fiscal rules come in Sweden after a period of high fiscal deficits and a substantial increase in the public debt to GDP ratio in the early1990s. This fiscal deterioration was partly caused by the severe recession and banking crisis of the early 1990s. The government elected in September 1994 faced a fiscal deficit of 10.5 percent of GDP and a ratio of public expenditures to GDP approximately equal to 70 percent. Gross public debt as a proportion of GDP almost doubled in 1990-1994, increasing to over 75 percent of GDP. The government reacted by issuing a "Consolidation Program" during the winter of 1994–95. The program included measures equivalent to 7.5 percent of GDP to be implemented over the period 1995–1998. In 1996, the Consolidation Program was augmented in order to allow room for an additional saving of around 0.5 percent of GDP.

The Institutional Arrangement

54. To consolidate the achievements of 1994–1996, the government introduced a fiscal rule, which was approved by Parliament in 1996 and implemented beginning in 1997. This resolution complemented and augmented previous Parliament resolutions and government guidelines. In 1993, the government strengthened financial control over its agencies. In 1994, Parliament resolved that the public budget should be planned on a 4-year basis, while in 1995 Parliament ruled that the budget should be prepared based on an expenditure ceiling for the public sector.

Objectives

55. The rules aim at achieving the long-term government's goal of a budget surplus of 2 percent of GDP over the cycle to prepare the public finances for population aging. This goal is intended to be met with no further tax increases. The consolidation measures were in part guided by the Maastricht criteria for convergence to EMU. [22]

Characteristics

56. Work on the public sector budget begins more than a year before the start of the relevant fiscal year.[23] In December, the Ministry of Finance reports to the government on the forecast of economic trends, which is done on a realistic (rather than prudent) basis. This is used as input for the "Spring Fiscal Policy Bill" (SPF) that the government presents to Parliament no later than April 15. Budgetary planning is made on a rolling 3-year basis based on economic forecasts that are reviewed by both the Parliament and the government. The basic fiscal targets are a binding nominal ceiling for central government expenditure and the general government net borrowing. The SPF contains the government's forecast for revenues and expenditures, and the allocation of expenditures among 27 expenditure areas. The document also contains a "Supplementary Budget" with proposed changes in appropriations for the current year.[24] The expenditure areas covered exclude pension costs and interest

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[22] However, according to the Rome Agreement of 1992 Sweden is an observer member of the European Union and does not participate in EMU.

[23] The public sector in Sweden includes the central, local, and regional governments and fiscal agencies.

[24] The new budgetary process gives the Ministry of Finance more powers in drawing up the budget compared to the earlier process.

payments; the latter are excluded since they are considered beyond public sector control.[25] As a result, the expenditure ceiling covers approximately two-thirds of total expenditure.

57. Since the ceiling is set in nominal terms and on a 3-year rolling basis, the government's SPF includes updates of expected price movements, as well as projected expenditure ceiling for the new third year. In order to create room for forecast errors, the ceiling is set up at a slightly higher level than the sum of the expenditure items included. This "Budget Margin" serves to accommodate differences between ex-ante projections and ex-post outcomes without having to change the expenditure ceiling. In the Budget Bill of 1997, when the expenditure ceilings were first set, the budgetary margins for the period 1997–99 were established at 1.5, 2.0, and 2.5 percent of total expenditures respectively. In practice, the margins have been used to finance discretionary increases in public expenditures.

58. The SPF constitutes the basis for the Budget Bill that is submitted to Parliament by September 20. When Parliament receives the Bill, it decides in two stages. In the first stage, it approves the global expenditure ceiling, the expenditure ceiling for the expenditure areas, and changes in taxes. After this decision has been made, no further changes in the ceilings are allowed. In the second stage, the various parliamentary committees decide how the expenditure in each area is to be allocated to the individual appropriations. The final Budget Bill has to be approved by mid December.

59. After approval, ministries monitor the development of expenditures on a monthly basis. In August, there is an interim report on the first half of the year, and an assessment on the use of appropriations for the rest of the year. The government has to inform Parliament of substantial deviations from the expenditure ceilings and of the reasons for such deviations. As mentioned above, if necessary, the government can propose an amendment to the current budget by means of a Supplementary Budget to be presented with the SPF. Any overruns have to be financed by reductions in other areas of spending, though for the differences between ex-ante and ex-post outcomes there are no formal sanctions. In the case of limited expenditure overruns, a borrowing possibility is allowed, but the amount borrowed is automatically deducted from the budget appropriation of the following year.

60. Finally, the National Audit Office (RRV) carries out annual audits and efficiency audits. The annual audit examines whether an agency's annual report gives a true picture of its financial situation and performance, while the efficiency audit concentrates on how government activity is carried out. The RRV presents its observations by April 1.

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[25] There is an indicative ceiling for general government expenditures, which includes estimated local government expenditure. It is only indicative because local governments have the right to decide on their own levels of expenditure. However, local government expenditure is primarily affected by central government grants and tax revenues, so the indicative ceiling is actually quite binding. Additionally, as of 2000, the Parliament decided that municipalities and county councils should present budgets with ex-ante surpluses.

Evaluation

61. Even though the rules have been in place only for the last four years, it is clear that the first results are positive, although favorable economic growth has also contributed to the outcome. Government expenditure as a percentage of GDP has decreased to about 55 percent of GDP in 2000 form around 70 percent in 1997, and the Budget Bill for 2001 projects a further decrease to levels around 53 percent. At the same time, the fiscal balance has shown steady surpluses since 1998. Accordingly, the gross public debt to GDP ratio is forecast to decrease to below 55 percent of GDP in 2001 from a level of 75 percent of GDP in 1997.

Switzerland

Background

62. During the 1980s, the Swiss authorities were able to manage the fiscal accounts prudently, which resulted in public debt to GDP ratios substantially below those of other European countries. In the first half of the 1990s the Swiss economy experienced a protracted recession which reduced the annual average growth rate of GDP from 1.8 percent in 1970-1990 to zero in 1990–1996. As a result, spending growth, fueled by raising pensions and health care costs, outstripped revenue growth and deficits appeared. The situation worsened as unemployment rose from below 1 percent of the labor force to over 5 percent. The public debt as percentage of GDP increased from 31 percent in 1990 to 54 percent in 1998, especially because of an increase in the debt of the federal government.

The Institutional Arrangement

63. In 1998, a constitutional amendment established the obligation to balance the federal budget by 2001.[26] In order to achieve this goal, the authorities cut military spending and the railroad budget, and increased social security payments by the cantons. The recovery of the economy in 1999–2000 allowed the Swiss government to balance the budget one year earlier than planned. In 2000, the government proposed another constitutional amendment, subject to a public referendum in 2001, that introduces rules to control the fiscal accounts of the federal government in all stages of the business cycle.

Objectives

64. The Swiss fiscal rule aims at preventing structural deficits in the federal budget and allowing scope for counter-cyclical fiscal policy.

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[26] Budget "balance" was defined as at most a deficit of 2 percent of total revenues.

Characteristics

65. The fiscal rule proposed in the constitutional amendment imposes a ceiling on federal government expenditure (including capital expenditure but excluding net lending to the unemployment insurance fund) according to the following formula:

$$G_{t+1}^{C} = E_t(R_{t+1}) \cdot E_t(C_{t+1}), \tag{1}$$

where G_{t+1}^{C} is the projected, or ex-ante, one-year ahead ceiling on federal expenditures, E_t denotes the expectation operator at time t, R_{t+1} is one-year ahead revenue, and C_{t+1} describes the cyclical position of the economy. The latter is defined as,

$$C_{t+1} = \frac{YT_{t+1}}{Y_{t+1}}, \tag{2}$$

where YT_{t+1} denotes one-year ahead trend real GDP and Y_{t+1} is the one-year ahead real GDP; thus, $C_{t+1} > 1$ if the economy is below trend and $C_{t+1} < 1$ if the economy is in a period of expansion. Equation (1) implies a level of expenditures that depends on projected fiscal revenues and on the position of the economy in the cycle. Thus, if the economy is expected to be below trend, expenditures are allowed to exceed revenues and vice versa, allowing for the fiscal position to move counter-cyclically. As a consequence of this mechanics, the federal budget is expected to be in equilibrium over the cycle. Thus the fiscal rule is approximately a rule on the cyclically adjusted balance.[27]

66. The Swiss fiscal rule is intended to hold also ex post, i.e., at the execution stage. However, equation (1) relies on projections which sometimes may be inaccurate. To address this problem, the proposed fiscal rule creates a fictional account, $F_t = \sum_{j=\tau}^{t} A_j$, where A_j denotes deviations from the original (ex-ante) budget balance. This fictional account is credited in case of an unexpected surplus ($A_{t+1} > 0$) and debited in the case of an

[27] The procedure to compute the output gap ensures that this objective is met. In this regard, the authorities have proposed the use of the Hodrick-Prescott filter, but this is not legislated and the government is open to using other methods.

unanticipated deficit ($A_{t+1} < 0$).[28] If the fund exceeds 6 percent of total expenditures or 0.6 percent of GDP, the authorities must bring it back below the threshold within three years.

67. Supplementary budgets can be introduced in mid-year, but if they violate the fiscal rule they have to be approved by a qualified majority in both chambers of Parliament.[29] This provision attempts to give some flexibility to the rules in the event of exceptional circumstances, although the proposed law does not specify what these circumstances may be.

Evaluation

68. An evaluation of the workings of the proposed rule is still not possible due to its prospective nature.

United Kingdom

Background

69. The United Kingdom's fiscal policy was highly volatile during the 1970s, with deficits averaging around 3.3 percent of GDP in 1979–1996, and reaching over 4 percent of GDP in 1997. When the authorities attempted to control the fiscal accounts, fiscal policy turned pro-cyclical with the main burden of the adjustments falling on public investment. This bias against capital investment resulted in under-investment in public assets and in levels of capital formation below those of other G-7 countries. In this context, in 1977 the authorities introduced a new framework for conducting fiscal policy with the objective of making it more effective. The introduction of this framework was complemented by a clear separation between monetary and fiscal policy.

The Institutional Arrangement

70. The fiscal framework introduced in 1997, the "Code for Fiscal Stability" (CFS), is a set of principles and guidelines for effective fiscal policy that received statutory backing through the "Finance Act" of 1998. Thus, the CFS binds also future governments.

Objectives

71. The new fiscal framework intends to achieve multiple objectives. In addition to meeting the government's microeconomic objectives, i.e., those related to the efficiency and

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[28] In the formula for F_t, τ denotes the first period of application of the fiscal rule and t denotes the current period.

[29] The fiscal rule is considered to be complied with if modified expenditures exceed the ceiling by at most 0.5 percent of the ceiling.

effectiveness of taxation and spending, it intends to achieve macroeconomic goals over the short and long-term horizon. The short-term objective is to support monetary policy—where possible—by allowing the automatic stabilizers to smooth fluctuations in aggregate demand and, where prudent and sensible, provide further support to monetary policy through discretional changes in the public accounts. Over the long-term, the fiscal framework intends to ensure sound public finances and a fair allocation of taxation both within and across generations, and to avoid unsustainable increases in public debt by balancing, over the cycle, current expenditures with current revenues. In this way, the new fiscal framework aims at removing the bias against capital spending.

Characteristics

72. The CFS is based on three pillars: a set of fiscal policy principles, two fiscal rules, and specific reporting and auditing requirements.

73. Under the CFS fiscal policy should respect five principles: transparency, in the setting of fiscal policy objectives, the implementation of fiscal policy and in the publication of public accounts; stability, in the fiscal policy-making process and in the way fiscal policy impacts on the economy; responsibility, in the management of public finances; fairness, including a fair treatment among different generations; and efficiency, in the design and implementation of fiscal policy and in managing both sides of the public sector balance sheet.

74. In addition, fiscal policy should respect two general rules that are in accord with these principles. The first one, the golden rule, specifies that over the economic cycle, the government will borrow only to invest, while the second one, the sustainable investment rule, establishes that the public sector net debt as a proportion of GDP will be held over the economic cycle at a stable and prudent level. [30]

75. These fiscal rules provide benchmarks against which the performance of fiscal policy can be judged. In this sense, the U.K. fiscal framework is similar to that of New Zealand, since the determination of specific targets are left to the current authorities.[31] Accordingly, the government can change, permanently or temporarily, its objectives and rules of operation, provided that the new objectives and rules are in accord with the principles stated in the CFS and that the government specifies the reasons for departing from the previous goals. In the

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[30] In order to avoid loopholes, the definition of public investment follows that included in the System of National Accounts.

[31] As examples, the current authorities have stated that a sustainable level of net public debt to GDP ratio in 40 percent.

case of temporary changes, the government has to state when it intends to return to the previous objectives and rules.[32]

76. The CFS also specifies reporting and auditing requirements, and mandates the publication of a "Pre-Budget Report" to encourage debate on the proposals under consideration for the budget, a "Financial Statement and Budget Report" to disclose the key budget decisions and the short-term and fiscal outlook, an "Economic and Fiscal Strategy Report" outlining the government's long-term goals, its strategies for the future and how it is progressing in meeting its fiscal objectives, and a "Debt Management Report," outlining the government's debt management plans. Furthermore, the government has to publish its economic and fiscal projections, including estimates of the cyclically-adjusted fiscal position and long-term projections, assess the sustainability of policies and disclose and quantify, where possible, all decisions and circumstances which may have a material impact on the economic and fiscal outlook.

77. All reports have to be drawn up using best practice accounting methods and have to be referred to the Treasury Committee of Parliament, ensuring that the general public will have full access to them. The National Audit Office is in charge to audit changes in key assumptions and conventions on which fiscal projections are based. The CFS does not include provisions for formal sanctions; thus, enforcement is based on reputational considerations, supported by the rigorous reporting requirements.

78. To support the fiscal framework, the government has implemented a new regime for planning and controlling spending.[33] This regime establishes that all spending departments will have "Departmental Expenditure Limits (DEL)," which will be set in nominal terms for three years on a two-year rolling basis. The DELs are only adjusted if inflation forecasts differ significantly from the original projections. Unspent DEL funds can be carried over to the next year, but overruns are not allowed. DELs cover most non-cyclical primary expenditure, i.e., around 50 percent of total expenditures, and include central government transfers to local governments.

79. Expenditures that are not subject to multi-year limits are subject to annual scrutiny as part of the budget process and are referred to as "Annually Managed Expenditure" (AME). Current and capital expenditures are treated separately in order to be consistent with the golden rule established in the CFS. The ceiling on AME is only binding for the current budget year and it includes a contingency reserve in order to deal with changing circumstances.

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[32] The rules of operation are related with government practice and are not specified in the CFS. For more on this, see below in the section.

[33] It should be noted that the supporting expenditure framework is not established in the CFS.

Evaluation

80. Since the beginning of the fiscal framework, fiscal accounts have improved markedly, with consistent decreases in the public debt-to-GDP ratio, which is projected to reach 30.3 percent in 2001/02. At the same time, the general government balance switched from a deficit of 3.8 percent of GDP in 1996 to an estimated surplus of 3.6 percent of GDP in 2000. The structural balance improved from a deficit of 3.0 percent to a surplus of 1.9 percent over the same period. Thus, a significant part of the fiscal improvement is not attributable to the positive position of the U.K. economy in the business cycle.

United States

Background

81. During 1950-1975, the public debt to GDP ratio declined continuously, while the budget deficit remained low.[34] In 1975, however, public expenditures began to increase rapidly mainly due to expanding entitlement programs. Initially, the deficits were partly covered by growing tax revenues, as high inflation moved individuals into higher income tax brackets. However, the introduction of inflation indexing in the tax code, tax relief introduced through the "Economic Recovery Tax" of 1981, increases in defense spending, and an adverse cyclical position resulted in a substantial increase in the public deficit, which reached more than 6 percent of GDP in 1983. After the mid 1980s the deficit was reduced thanks to stronger economic activity and to several legislative initiatives, but the mild recession of the early 1990s resulted in a new increase in the budget deficit. All in all, the public debt to GDP ratio rose from approximately 25 percent in the early 1970s to just under 45 percent in the early 1990s.

The Institutional Arrangement

82. The U.S. experience with fiscal rules is a long one.[35] Recent rules were introduced in a series of laws enacted since the mid 1980s. The "Balanced Budget and Emergency Deficit

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[34] The discussion that follows refers to the federal government only.

[35] According to Peach (2001), the first law that incorporates a provision that can be interpreted as a fiscal rule is from 1917. This law, the "Liberty Bond Act," established a statutory limit on the gross indebtedness of the Federal government. This law intended to provide a simplifying procedure to the issuing of bonds, since before the law, every individual bond issue had to be approved by the Congress. In the 1980s and 1990s, the need to raise the federal debt ceiling motivated the enactment of deficit reduction legislation. Additionally, the "Congressional Budget and Impoundment Control Act" of 1974, established the current congressional budget process, with the creation of the House and Senate Budget Committees and the Congressional Budget Office (CBO).

Control Act" of 1985, also known as Gramm-Rudman-Hollings I (GRH I), established specific deficit targets for each year through 1991. This law was followed in 1987 by the "Balanced Budget and Emergency Deficit Control Reaffirmation Act," also known as Gramm-Rudman-Hollings II (GRH II), which revised the deficit targets established in 1985 and extended them through 1993. In 1990, as part of a major deficit reduction package, Congress approved the "Budget Enforcement Act (BEA 1990)," which replaced the deficit targets with expenditures ceilings or "caps" and established a "pay-as-you-go" system (PAYGO) for the period 1990–1995. The Act also established guidelines concerning how baseline budget projections were to be made. In 1993, the "Omnibus Budget Reconciliation Act," extended the provisions of the 1990 law until 1998.[36] Finally, the "Budget Enforcement Act" (BEA) of 1997 extended again the provisions of the 1990 law until 2002. Due to the success in controlling the deficit, the budget for 2002 proposes the extension of the spending caps and the PAYGO system until 2006.

Objectives

83. The goal of GRH I and GRH II was to increase fiscal discipline by reducing the public deficit and control the increase in the public debt. The BEA 1990 and 1997 shared with its legal predecessors the objective to control the fiscal deficit and the public debt, but changed the fiscal framework used to achieve the goals.

Characteristics

84. GRH I specified declining nominal targets for the budget deficit, ending with budgetary equilibrium in 1991. The targets were to be enforced by uniform percentage reductions in selected mandatory and most discretionary spending programs. However, this was ruled unconstitutional because its implementation violated the separation of powers. In 1990, because of unexpected expenditures arising from the war with Iraq and a major flood, and faced with the prospect of substantial expenditure cuts (over 30 percent in some programs, including defense), the President and Congress agreed to postpone balancing the budget until 1993 (GRH II). This triggered a change in the fiscal framework, and the BEA 1990 reflects such a change.

85. The BEA 1990 changed the main control variable from the budget deficit to expenditure.[37] The BEA defined categories of discretionary spending and established

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[36] In 1996, Congress approved the "Line Item Veto Act," which granted the President the authority to cancel selected categories of spending and tax provisions over the period 1997-2004. However this act was declared unconstitutional by the Supreme Court and therefore abolished.

[37] It additionally placed the sequester "trigger" in the hands of the Office of Management and Budget (OMB) Director.

nominal caps for them for the period 1990–95. Discretionary outlays were defined as those controlled by the annual appropriation process. Currently, discretionary expenditure represents about one third of total public outlays. The caps could accommodate emergencies and other circumstances. When initially enacted, there were three separate caps, covering defense spending, international spending, and non-defense domestic spending. The 1993 amendment introduced a single cap for 1994–96. Under the BEA of 1997, two separate caps were established for defense spending and non-defense discretionary spending for the period 1997–99, while a new cap for the years 1997–2000 was established for a new category of outlays called Violent Crime Reduction. In the 2001 Budget Bill there is again only one cap for all discretionary spending.

86. In addition to the nominal caps, the BEA of 1990 introduced the "PAYGO" system for revenues and direct spending. Direct spending included entitlement programs established through legislation; for these programs, outlays were determined not by annual appropriations but by the eligibility criteria and benefit formulas specific to each of them. Under the PAYGO system all changes in taxes and in direct spending had to be deficit neutral over one and five year horizons. The PAYGO did not require congressional action if revenues fell or outlays grew due to changing economic conditions or changing technical assumptions. Additionally, it was enforced one year at a time, implying that no "carry-over" was allowed.

87. Both the nominal caps on discretionary spending and the PAYGO system were enforced by the threat of sequestration. The required sequestrations were to be identified by the Congressional Budget Office (CBO) and the Office of Management and Budget (OMB), and to be enforced by the President based on the OMB estimates.[38] The sequestration process was characterized by three stages which resulted in three different reports, a preview report, and update report and a final report, which had to be based on consistent economic and technical assumptions. Sequestration could be suspended in the event of a Declaration of War or a passage of a joint resolution of Congress triggered by a CBO report indicating that economic growth was likely to slow below a defined threshold rate. In practice, however, appropriations have been deemed to be "emergencies" to skirt PAYGO provisions. The law also introduced new budget-related reporting, such as the "President's Budget Review."

Evaluation

88. The GRH laws did not produce the targeted decline in deficits because of mistakes in estimating the potential rate of growth of GDP and of flaws in the determination of the targets. As a result, the sequestrations required to achieve the goals were so large that they were unworkable. In contrast, the BEA 1990 and its subsequent modifications (1993, 1997) established more realistic targets, and fiscal restraint was more easily maintained.

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[38] According to Peach (2001), there was only one sequestration since the enactment of the law, and of a very modest magnitude.

Nonetheless, an important part of the improvement in fiscal accounts during the 1990s was due to the favorable position of the U.S. economy in the business cycle (about 40 percent according to the CBO).

89. Finally, some have argued that the BEA may not be enforced at the current juncture since the law indicates it was developed to address deficits and the U.S. budget is now in surplus. Also, the PAYGO rules have been interpreted to allow spending in future years to be financed from unexpected revenues in the previous years.

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III. Country Experiences with Internal Stability Pacts (ISPs)[39]

Germany[40]

90. In the run-up to EMU, an intense debate took place in Germany on the design of an ISP, but major differences in needs and economic strength among *Länder* prevented an agreement. The first contentious issue was the legal form of the ISP. The federal government proposed that the ISP should be enshrined in a federal act, and that decrees would be approved jointly by the federal government and the *Länder*. While some *Länder* considered a constitutional amendment or "federal treaty" appropriate, others supported a "case by case" arrangement. Another contentious issue was the distribution of the 3 percent of GDP deficit ceiling of the Maastricht Treaty and/or SGP target between the federal government and social security funds, on the one hand, and *Länder* and local governments, on the other. The federal government proposed a fifty-fifty distribution. By contrast, the *Länder* demanded a distribution of sixty-forty in their favor on the grounds that the federal government could absorb unexpected shocks considerably better than the *Länder*.

91. Concerning the allocation of deficit ceilings within each level of government, the federal government and some *Länder* supported a distribution based on population size. Many *Länder*, especially those in the East with large deficits, insisted that the initial situation (existing deficits, per-capita income) be considered. The fourth issue was the distribution of sanctions resulting from excessive deficits. The federal government proposed that sanctions be allocated according to the responsibility of each level of government, while the *Länder* argued that the German constitution prohibited the imposition of such a heavy financial burden.

Italy[41]

92. In 1999 Italy introduced an ISP requiring sub-national governments (regional and local) to reduce their deficits and debt.[42] The deficit was defined as the difference between

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[39] Prepared by Teresa Daban.

[40] This section draws on Wendorff (2001).

[41] See Balassone and Franco (2001) for a discussion.

[42] In the early 1990s Italy began a gradual decentralization process from a situation in which sub-national governments' revenues consisted basically of conditional transfers from the central government, to a situation in which most of the sub-national revenues are own or shared taxes. Before the ISP, the limits on sub-national governments' borrowing were set by a "golden rule" with an indirect ceiling (debt service could not exceed 25 percent of own revenues). Frequently, however there was unlimited year-end coverage of deficits (in the health and transport sectors, for instance) by the central government.

total revenues net of state transfers and total expenditures net of investment and interest payments (on a cash basis). The three-year total adjustment was divided among the different levels of sub-national governments (regions, provinces, and municipalities) in proportion to their respective levels of total expenditure. Within each level, fiscal adjustment was allocated in proportion to primary current expenditure in the previous year. Accordingly, even if a government was already running a surplus it had to contribute to the effort. The previously existing ceiling on debt service payments (no higher than 25 percent of own revenues) remained in place. Finally, the ISP established that, if Italy was sanctioned under the Maastricht Treaty, the fines would be levied on the entities that failed to meet their targets, in proportion to the part of the overshoot for which they were responsible. These sanctions were not credible because they could result in excessive penalties for sub-national governments.

93. In 1999 only half of the fiscal consolidation projected in the ISP was achieved. The Pact was therefore modified in late 1999. First, a more ambitious target for 2000 was set for sub-national governments. Second, the definition of the overall balance was changed to include receipts from the sale of real estate assets as part of public revenues. Third, sub-national governments meeting the objectives of the ISP would be granted a reduction in the interest on their outstanding debts to the *Cassa Depositi e Prestiti*.[43] The results for 2000 suggest that local governments complied with these revised targets, while the regions breached their deficit ceilings. For 2001, it was established that the targeted balance could not worsen by more than 3 percent relative to its 1999 level.

Spain

94. In 1991, following the publication of the March 1992 Convergence Program (CP) for Spain, the central government and regional governments agreed to the so-called Budget Consolidation Scenarios (BCSs) for the period 1992-1996. These agreement, based on bilateral negotiations, specified the maximum deficit and debt permitted for each region. These programs were made public and became the main tool to coordinate the budgetary and debt policies of the central and regional governments. Though no region complied with the scenarios because of the 1992-1993 recession, they represented a turning point in the evolution of regional debt.[44] The BCSs were revised in March 1995, following the revision of the CP in July 1994, and were again modified in 1998 with the approval of the first Stability Program. While the former agreements were respected, the deficit and debt levels specified in the last agreement are unknown to the public, and no transparent sanctioning mechanism exists. Therefore, it is impossible to assess compliance.

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[43] This public institution is devoted to finance subnational governments. This incentive was undermined by the recent decision to grant all regions an unconditional reduction in the interest rate.

[44] See Viñuela (2001).

Austria[45]

95. In 1995 the federal, state (*Länder*), and local governments reached an agreement in which the different levels of government expressed their willingness to achieve budget balance primarily through expenditure reductions. Subsequently, in 1997, during negotiations on the intergovernmental transfer system, the different levels of government agreed on the maximum deficit that each of them would incur. Under this agreement the federal government was assigned a deficit of 2.7 percent of GDP and the lower levels one of 0.3 percent of GDP.

96. In the 1998 Austrian Stability Pact, all levels of government agreed on an internal allocation of the Maastricht Treaty deficit limit based mainly on population size. In addition, the Pact establishes two coordination committees (one national and one local) to negotiate deficit shares, establish guidelines for the medium-term and monitor and report public finance performance. Moreover, the pact established that the contribution of the federal government and each *Land* to the sanction payment in the case of an excessive deficit would be proportional to their share of the excess deficit itself. Local governments in one *Land* collectively share the responsibility for the deficit, and their contribution to sanction payments would be deducted from their share of federal revenues. *Länder* and local governments would be allowed to assign part of their permissible deficit to other entities. No sanctions were established for non-compliance with the deficit ceiling. The deficit shares are to be negotiated together with the intergovernmental transfer agreement between the federal and the sub-national governments for a period of four years. The agreement currently being negotiated would include sanctions for non-compliance.

Belgium[46]

97. In Belgium the general government consists of two bodies: the so-called Entity I, which includes the federal government and the social security system, and the Entity II, which includes communities, regions, and local governments. There exist three communities (the Flemish, the French, and the German-speaking community) and three regions (the Flemish, the Walloon and the Brussels-Capital region), referred to as the federated entities. Communities and regions are financially autonomous and are financed mainly through shared taxes, which are centrally collected and then allocated among the different levels of government according to parameters fixed by law. In addition, communities and regions can impose their own taxes and issue debt. Local governments are financed through regional grants and local taxes.

98. In 1994 a first agreement of cooperation between the federal government and the communities and regions was reached. Subsequently, other intergovernmental agreements

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[45] This draws on von Hagen, Hallett, and Strauch (2001).

[46] This draws on von Hagen, Hallett, and Strauch (2001).

were reached for the period 1996–99, in 1999 for the period 1999–2002, and in 2000 for the period 2001–2005. These agreements established permissible deficit levels for Entity I and Entity II. The targets were set according to the recommendations of the High Council of Finance, which is also in charge of monitoring and reporting on compliance.[47] The cooperation agreement does not include formal sanctioning procedures in case of deviation from the permissible deficits. However, the federal government can restrict the borrowing capacity of communities and regions for a period of up to two years upon recommendation of the High Council of Finance and after the regions involved have being consulted. Until now, this mechanism has never been invoked.

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[47] The High Council of Finance is composed of representatives of the ministry of finance, regional governments, central bank and economic experts.

IV. The Effects of Fiscal Policy Shocks on Aggregate Demand Under Rules and Under Discretion[48]

A. Temporary Spending Shock

99. With a binding *spending rule*, shocks leading to higher expenditures are ruled out by assumption, so we will focus on a spending rule that limits the amount of spending increases over the economic cycle. In the presence of such rule, an increase in public sector spending would be perceived as temporary. In a neoclassical framework (see, for example, Ahmed (1986) and Barro (1989)), this would entail, ceteris paribus, a small adjustment (or no adjustment) of private-sector spending, and therefore an increase in external borrowing (a current account deficit).

100. Consider now the case of a *discretionary fiscal regime*: in this case, the increase in spending may be perceived as being more persistent, because the government is not required to adjust future spending in line with the fiscal rule (and because the government has a spending bias by assumption). Given the bound of the intertemporal budget constraint, private agents will anticipate an increase in the future tax burden and adjust their current consumption behavior accordingly. This implies, ceteris paribus, a smaller increase (or no increase at all) in aggregate demand, and a smaller current account deficit.

101. Finally, consider a *rule on the cyclically adjusted budget balance*: in this case, the spending shock could be offset through lower future spending or higher future taxation. We already analyzed the former case. In the latter case, the effects would be more similar to those occurring under discretion, but the fact that tax increases may occur sooner rather than later would tend to reduce further private sector demand. Given the assumption of an excess spending bias, private agents may attribute a higher probability to a future tax increase (rather than a spending cut). This would imply an outcome similar to the one under discretion.

B. A Temporary Shock to Tax Rates

102. In analyzing the impact of an unexpected reduction in tax rates the key issue is again whether the public expects the government to meet its intertemporal budget constraint through higher future taxes or lower future government expenditure. Given the assumption of an excess spending bias, assume the former. In the presence of a *cyclically-adjusted budget rule* the perceived 'temporariness' of the tax cut would imply no impact at all on private sector consumption if consumers are fully Ricardian, or a very modest one if they have a discount rate higher than the rate of interest.

103. Under a *discretionary regime*, if the tax cut is perceived as lasting for a longer period, the response of private sector consumption may be stronger.[49]

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[48] Prepared by Gian Maria Milesi-Ferretti.

104. In the presence of a *spending rule*, there would be no constraints on whether the adjustment will take place through lower future spending or higher future taxes, and therefore the impact would be the same as in the discretionary case.

C. Permanent Spending Reductions

105. Suppose that the government announces and implements a reduction in government expenditure, announcing that this reduction will be permanent. In the presence of a *spending rule*, private agents may find the announcement credible. This would lead them to increase private consumption.

106. Under *discretion*, private agents may consider that lower spending may not be sustained: this would imply a smaller increase in private consumption than in the presence of a rule, and hence lower aggregate demand.

107. In the presence of a *balanced budget rule*, agents will not be sure as to whether there will be permanently lower spending and hence lower taxes (as in the case of a spending rule) or only a temporary decline in spending. The effect may therefore be similar to the one under discretion.

D. Permanent Reduction in Tax Rates

108. In the presence of a *budget rule*, an announced permanent reduction in tax rates would imply lower spending as well. This would imply higher private consumption.[50]

109. Conversely, under *discretion* agents may expect a more limited reduction in spending (and hence a future increase in tax rates) and would therefore increase private consumption by less.

110. Under a *spending rule*, a permanent reduction in tax rates would be credible if the rule in question is consistent with it. In this case, the effects would be the same as under a budget rule.

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[49] If the public expects an expenditure reduction (for example if there is a deficit bias but not an excess spending bias), the private sector will expect it to occur sooner under a budget rule, because the rule constrains the budget balance. In this case, the tax cut would stimulate an increase in private consumption which is larger under a rule than under discretion.

[50] With distortionary taxes, the reduction in tax rates would tend to stimulate labor supply while the reduction in spending would tend to increase leisure because of a positive wealth effect. The net effect on production would be ambiguous. See footnote 67.

E. Empirical Issues

111. A number of studies have examined whether the cyclical response of the budget to shocks depends on different types of fiscal rules in US states, and the implications for macroeconomic volatility. Bayoumi and Eichengreen (1995) find evidence that the response of the budget to macroeconomic shocks is weaker under tighter budget rules, but Alesina and Bayoumi (1996) find no evidence of higher output volatility under more stringent fiscal rules. Kopits and Symansky (1998) use stochastic simulations to show that based on the historical covariance of shocks, tight fiscal rules increase output variability.

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