On the 'burden' of German unification *

JÖRG BIBOW

1. Introduction

Since 1992 western Germany's real GDP growth has averaged less than 1.5% per year, way below any measure of its previous potential output trend. Conventional wisdom attributes the protracted slowdown of GDP growth and marked deterioration in public finances since unification to that very event: Germany was brought to its knees, it is suggested, by the 'burden' that the collapsing former East Germany put on the former West Germany's shoulders. In addition, it is also popular in this context to blame Germany's allegedly all-pervasive structural problems (OECD 2002).

The analysis in this paper raises substantial doubts about this view, demonstrating that Germany's approach to macroeconomic policymaking has for some time been in sharp contrast with economic theory and the best practices of more successful countries. Unification undoubtedly posed a formidable fiscal challenge. But the primary root of united Germany's problems today originated in West Germany itself. Ill-timed and unaccountably tight fiscal policies in conjunction with tight monetary policies of an exceptional degree and duration are diagnosed as key factors behind the severe, protracted de-stabilization of western Germany.

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Girsch, Paque and Schmieding (1992, p. 262) perceptively observed on relative economic size that:

> "In comparison to West Germany, with its well-established and advanced market economy, East Germany was rather small (26.5 per cent in terms of population, roughly 10 per cent in terms of GDP [...]). Hence, regardless of the details of the policies adopted, German unification meant from the outset that the pains of political and economic transformation in the East were to become mere regional problems of a much larger unit whose overall stability would be only marginally affected by whatever difficulties the switch to a market economy in the eastern part would entail".

Addressing the question why West Germany's stability was shaken rather more than only marginally, Section 2 of this paper begins by discussing West Germany's economic and budgetary starting position in 1988-90 and provides a preliminary assessment of the magnitude of the fiscal challenge posed by unification. Investigating the issue of public finance sustainability, Section 3 shows that unification posed no *immediate* risk of unstable debt dynamics, and indeed that there was no great need for *medium-term* fiscal consolidation on a large scale. The analysis then turns to fiscal and monetary policies in Sections 4 and 5 respectively, and these policies are found to have been in conflict with both economic theory and best practice. Section 6 then estimates some of the fiscal consequences of sluggish growth while Section 7 offers some final thoughts on the actual fiscal burden of unification. Section 8 concludes.

2. Germany on the eve of unification and the ensuing fiscal paradox of the 1990s

Any assessment of subsequent developments over the 1990s must take due account of the favourable economic shape of West Germany as the happy event arose. GDP growth was running at 3.7 and 3.6% in 1988 and 1989 respectively, almost double the pace of sluggish growth since the 1981-82 recession. Not only were exports – traditionally relied upon by Germany to give the economy spurt – performing strongly, but fiscal and monetary policies were also (belatedly) contributing to recovery in domestic demand: alongside the income tax cuts of 1986 and 1988 came an accommodative Bundesbank stance, lasting until 1989. This policy-mix contrasted favourably with the fiscal austerity *cum* monetary restraint that had stabilized activity at persistently depressed levels during the first half of the 1980s. The year 1989, when the Berlin wall came down, stands out as the finest year in a decade: non-inflationary and broadly-based GDP growth due to strong domestic and foreign demand yielded high employment growth and a balanced budget, along with a current account surplus of close to 5% of GDP.

In 1990, however, the world economic situation changed for the worse. With recession looming in the US and elsewhere, Germany's exports began to fall sharply as from mid-1990. Unification thus represented not only a challenge (and responsibility) to get East Germany on track for a prosperous future; it was also a welcome opportunity for West Germany to hold itself back from sliding into recession as well (indeed, it represented a great opportunity for European growth). However, this was not the way the key player in German economic policymaking, the Bundesbank, saw things. The Bundesbank never regarded the situation as an opportunity for sustained growth, but primarily as a risk to price stability. Based on the belief that West Germany's economy was already running at its full potential by 1989, the Bundesbank saw a serious danger of overheating with run-away inflation.

Contrary to this assessment, however, western Germany's real GDP would continue to grow at a stunning 5% rate, as it did in both 1990 and 1991. One mistake was to underestimate the fact that the economy had operated at persistently depressed levels throughout the 1980s and still had ample spare capacity, and in particular unemployment, still above 6% in 1989. It is therefore noteworthy that the vigorous employment growth of those years was fairly evenly distributed, including low-skill workers and long-term unemployed. Moreover, the influx of labour from behind the former iron curtain provided supply-side relief too, so that general labour market pressures proved anything but severe. Pressures were, however, high on western Germany's capital stock in these years, calling for increased machine hours and additional work shifts. However, as a boost to profits stimulates investment to expand capacities and adopt the latest technologies, compensatory disinflationary effects arise. In fact, growth on the supply side was both vigorous and broad-based in these years, as investment, labour productivity, and potential output showed a marked increase (in contrast to the 1980s, when weak demand and underutilized capacities made for slack investment and capacity growth). Another mistake would be to overlook the fact that Germany is an open economy. Given the recessionary conditions elsewhere, it was even less likely that an expansion of aggregate demand in Germany might pose an inflation risk and run against some 'saving constraint'. And with a current account surplus of almost 5% of GDP at the outset, there was no risk that Germany might have to face any imminent current account constraint, either.

Western Germany's allegedly fully-employed economy thus coped quite smoothly with the strains that unification put on its resources: GDP growth over the period 1989-91 was not only strong but also *non*-inflationary.[1] Producer price inflation remained stable at around 2% throughout the period of lively growth, while headline CPI inflation was at 2.7% in 1990, down slightly from the 2.8% of the previous year – all perfectly in line with Germany's inflation trend during the 1980s.[2] Headline CPI inflation picked up a bit in 1991, to 3.5%, peaked at 4.0% in 1992, and fell rather sluggishly thereafter (back 'below 2%' by 1995).

One crucial factor behind price developments at the time lay in the hefty rent increases – reflecting the pressures of immigration on the housing market, in particular. It is at least debatable whether bringing about a general economic slowdown represents an adequate policy response to these natural market forces. Another key factor was determined not by market forces, but by policy in the first place: in fact, the critical rise in headline CPI inflation in 1991 was largely caused by hikes in indirect taxes and government-administered prices.

[1] The Bundesbank and the 'wise men' (the Sachverständigenrat [SVR; Germany's Council of Economic Experts]) appeared surprised about western Germany's supply-side elasticity and benign price developments. See e.g. SVR, *Jahresgutachten* (Annual Report) [*JG*] 1990-91, Art. 156; SVR, *JG* 1991-92, Art. 120; Deutsche Bundesbank, *JG* 1990, p. 19.

[2] It is a gross mistake to compare West German inflation in 1986 (–0.1%) with All-German inflation in 1992 (5.1%) and conclude that a major inflation outburst had occurred in between. For one thing, taking 1986-87 as the base fails to distinguish price level effects (owing to the oil price slump in 1986) from inflation proper. For another, as the Bundesbank (1991) made clear at an early point, adjustments in relative prices in eastern Germany in the early 1990s should not be interpreted as inflation either. Cf. also Akerlof *et al.* (1991) and Sinn and Sinn (1992).

These fiscal measures were taken with the intention of cutting public borrowing needs. They arose under mounting Bundesbank pressures, based on the argument that cuts in public borrowing would be necessary in order to prevent inflation.[3] Alas, rather than preventing inflation, these very measures *caused* inflation in the first place. In response to the rise in headline CPI inflation, the Bundesbank further tightened monetary policy.[4]

This peculiar policy inconsistency was at the heart of Germany's economic malaise during the 1990s. It not only caused the initial rise in inflation in 1991-92, but was also behind the sluggish fall in inflation thereafter. The 1992-93 recession was, however, critical as borrowing requirements soared. Ever-new rounds of hikes in indirect taxes and administered prices were implemented. The intention was to keep borrowing in check (and Bundesbank pressure at bay). Instead, they caused further 'tax-push inflation', which in turn discouraged the Bundesbank from monetary easing and encouraged ongoing pressures for fiscal consolidation (Bibow 1998). This truly bizarre policy inconsistency had far-reaching consequences, and our analysis will return to it in the context of monetary policy in Section 5.

But to first get an idea of the order of magnitude of the fiscal challenge posed by unification we may well begin with fiscal transfers, although a number of problems immediately arise here. One is that (continuous) flows of current transfers – and their financing – have to be kept separate from what may be properly described as 'inherited debts'. One-off stock adjustments due to inherited debts raise the debt ratio and, hence, the interest service on the debt too, but current transfers are more pertinent in assessing budgetary stance and matters of sustainability and fiscal consolidation.

Next, official estimates of fiscal 'transfers' by the German Finance Ministry (Deutscher Bundestag 1998 and 2000) put them at some DM 180 billion per year as from 1991 (roughly 6.5% of western Germany's GDP). As this figure is the sum of all unification-related

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[3] As is evident from its publications and public statements, the Bundesbank wielded its enormous powers and put increasing pressure on the government to prevent debt-financing of unification throughout (cf. Akerlof *et al.* 1991 and Owen Smith 1994). In the early years, moreover, the Bundesbank's forecasts of budget deficits were consistently (and conspicuously) on the high side (cf. von Hagen 1994). Kloten (1997) offers some insights into the thinking behind the Bundesbank position.

[4] "In addition, high interest rates contributed significantly to the increase in unit costs this year", as observed by Germany's wise men (SVR, *JG* 1990-91, Art. 158).

expenditures and tax relief, it needs correcting for federal revenues in *eastern* Germany to get an estimate of transfers proper (from western to eastern Germany). Official estimates put (net) transfers at some DM 120-140 billion per year from 1991 (roughly 4.5% of western Germany's GDP; see Table 1).

Finally, a word of caution: while it is also of some interest that a large proportion of transfers arose essentially in the form of entitlements (Burda and Busch 2001, Grossekettler 1996), it should also be borne in mind that 'net transfers' are not an appropriate measure of the financing or borrowing requirements resulting from unification. Clearly, (gross) fiscal transfers benefited public finances in *western* Germany through second-round effects too, either directly by raising 'exports' to the new eastern Länder, or indirectly by raising incomes in Germany's export markets proper. Due to these multiplier and *self-financing effects* one would expect actual financing requirements to be considerably lower than DM 140 billion.[5]

The overall budget outcomes in 1990-91 confirmed this expectation. Starting from a balanced budget in 1989, the budget swung to a deficit of *only* DM 87 billion (or 2.9% of GDP) in 1991. The budgetary swing between 1989 and 1991 reflected the joint effects of three factors in particular: first, reduced revenues attributable to the income 1990 tax reform, amounting to some DM 40 billion,[6] second, (net) fiscal transfers attributable to unification, for some DM 106 billion, and third, increased revenues attributable to increases in tax and social security contribution rates in 1991, for about DM 25 billion.

Note here that, initially, measures aimed at financing the 'burden' of unification other than through borrowing were introduced on a limited scale only. Arguably, the deliberate recourse to borrowing represented the only *practicable* policy option anyhow. Certainly, the policy chosen to cope with the fiscal exigency of unification was well in line with one of the oldest economic doctrines:

> "[if] an immediate and great expence must be incurred in [any] moment of immediate danger, which will not wait for the gradual

[5] One estimate puts this factor in the order of magnitude of some DM 50 billion per annum (see Heilemann and Jochimsen 1993, p. 24, Table 4; Heilemann and Reinicke 1995, p. 100, fn. 5). Additional fiscal savings arose as expenditures previously incurred due to Germany's division fell away gradually after 1990.

[6] Germany's wise men put the figure at DM 38 billion for the year 1990 (SVR, *JG* 1990-91, p. 142).

> and slow returns of the new taxes [...] government can have no other resources but in borrowing" (Smith 1776; cf. Heilemann and Barabas 1999).

As we have already seen, theoretical reservations about deficit spending were not applicable to the situation on hand either. When Keynes (1972 [1940]) famously recommended tax rises aimed at restraining aggregate demand, he was referring to the prospective British war economy, a literally fully-employed economy which would also be largely cut off from external resources. The Germany of 1990 and thereafter was far from such exceptional war-time conditions. Refuting claims – much bandied about in the 1980s, too – about 'structural problems' that had allegedly hindered its growth potential, miraculously, the German economy ran smoothly at a 4-5% pace for four years in a row without any significant rise in market-determined inflation above its previous 2.5% price trend. By 1991-92, the impact of unification had essentially run its course. The current account balance had turned into a small deficit of around 1% of GDP. And the economy's capacity output was utilized at a much higher rate than in foregoing years. But there was no second unification burden on any horizon. A one-off historical challenge had to be met – and so far things had gone fairly smoothly.

Nonetheless, starting in 1992, and under mounting pressures from the Bundesbank, the rudder of German fiscal policy was turned hard right. After two years of significant expansionary stimuli which in timely, counter-cyclical mode steered Germany away from recession (experienced elsewhere at that time), the German government began to introduce ever new fiscal measures with the aim of cutting its borrowing requirements. A study by Heilemann and Rappen (1997) estimates that by 1995 the total effect of expenditure savings and increases in tax and social security contribution rates introduced in the meantime was sufficient to "finance" almost the whole of the *gross* [sic!] fiscal transfers of DM 180 billion.

A glaring fiscal paradox emerges here. Up to 1991, it was deliberately left to borrowing to take up almost the whole of the fiscal brunt of unification, with a budgetary swing of 3% of GDP between 1989 and 1991. Then, between 1992 and 1995, a cumulative fiscal tightening occurred that was far in excess of the annual net fiscal transfers of some DM 120-140 billion, while tax and social security

Table 1 orizz.

rates were rising and government consumption and investment spending were stagnating or even falling. And yet, by 1996, Germany's deficit ratio stood at 3.4%, well *above* the initial level of 1991. Clearly, something must have gone seriously wrong. Prior to further examining Germany's fiscal paradox of the 1990s, the next section addresses the sustainability issue, whether unification posed any risk of unstable debt dynamics, and what degree of fiscal consolidation might have been required to (re-)attain a sustainable public finance position.

3. Sustainability of public finances: theory and German experience during the 1990s

Public concern about the public debt is closely related to the idea that rising public indebtedness implies rising taxes to service the debt. It is often overlooked that in a *growing* economy a rising tax *rate* may *not* be required to service a growing debt. Although budget deficits – self-evidently – add to the *absolute* amount of the debt, this may be sustainable *indefinitely* and not involve any *relative* rise in the (debt-related) burden on tax payers. In short, even permanent deficits do *not* necessarily pose a risk of unstable debt dynamics resulting from an unsustainable fiscal position.

Evsey Domar's (1944) seminal essay on the "burden of debt" established the following: an economy growing at a constant rate, g, and with the government borrowing the same constant deficit ratio, def, in each period, the debt ratio, d, will not explode but gradually approach a constant of def/g magnitude. Neither will the tax rate required to service the debt explode: rather, it will approach a constant in magnitude, $i \cdot def/g$, where i is the rate of interest paid on public bonds (for the sake of simplicity, assumed to be tax-exempt). Domar (1944, p. 822) wisely concluded that "the problem of the debt burden is essentially a problem of achieving a growing national income".

Luigi Pasinetti (1998a, 1998b and 2000) proposed a definition of public finance sustainability that renders this notion operational and applicable to specific economic situations. Public finances are judged *sustainable* as long as the public debt grows at a rate equal to or lower than the nominal GDP growth rate; that is, if the following condition is satisfied:

$$d_t \leq d_0 \tag{1}$$

This is an attractive definition as it clearly distinguishes the *sustainability* issue from the *optimality* question of some particular debt ratio (on which economic theory has nothing definite to say). Essentially, the debt ratio at t_0 is 'accepted' as given, whatever it may be. The test is whether the current budgetary position may be maintained indefinitely without leading to a rise in the initial debt ratio. The focus is thus on the key issue: a stable debt ratio implies a stable tax burden (on account of the debt) on tax payers, while a rising debt ratio implies a rising tax rate. Hence no specific deficit ratio may be generally regarded as sustainable, either. Starting out from a given debt ratio, a 'sustainability relation' between this debt ratio and the deficit ratio exists characterized by the *stability* of these parameters:

$$def = g\ d \tag{2}$$

In view of the inequality sign featuring in the sustainability definition (equation 1), this relation may actually be seen as a 'boundary relation' defining the 'sustainability area':

$$def \leq g\ d \tag{3}$$

A deficit ratio is thus judged sustainable as long as it does not exceed the product of the GDP growth rate and the debt ratio. In this case, there will be no tendency for either the debt ratio or the tax burden to rise, which brings us back to the point that sustainability critically hinges on GDP growth.[7]

Pasinetti's definition combines the benefit of technical simplicity with the strictness of criteria: it requires the sustainable position to have already been attained in the current period. Alternative definitions of sustainability (cf. Blanchard *et al.* 1991, Buiter 1985, Buiter, Corsetti and Roubini 1993) allow for greater fiscal laxity in the short term, as a current deficit judged unsustainable according to our definition might be compensated for by increased fiscal rectitude in future periods. Furthermore, the Domar-Pasinetti approach to debt sus-

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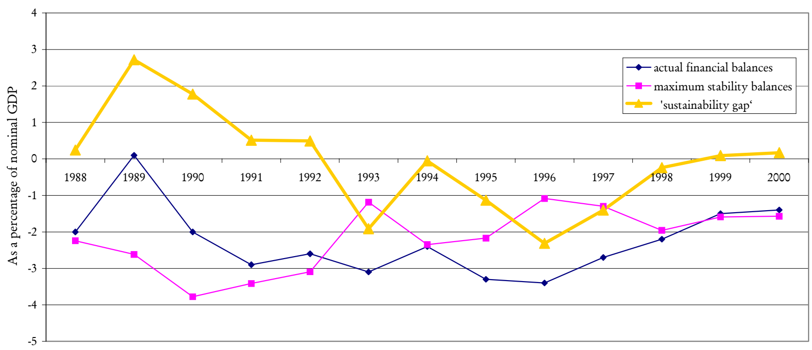
[7] A prominent example of possible parameter constellations is provided by the Maastricht criteria of 3% and 60% for the deficit and debt ratios, respectively. According to the stability relation, internal consistency of the Maastricht criteria presupposes 5% nominal GDP growth.

tainability appears particularly appropriate in the light of the fact that potential resource constraints (and corresponding inflation risks) became even less of an issue after 1991.

Applying this sustainability concept to Germany's public finances, Figure 1 shows the evolution of actual financial balances, 'maximum stability balances' and the 'sustainability gap' between 1988 and 2000. The notion of maximum stability balances refers to the deficit ratio that would have been sustainable indefinitely given the GDP growth rates and debt ratios prevalent in each period. The sustainability gap is defined as the difference between financial balances and maximum stability balances, with a non-negative gap implying sustainable debt dynamics in the sense of a non-rising debt ratio. Significant *positive* gaps are seen in the period up to 1992. Unification per se did not pose any immediate risk of unstable debt dynamics, but sharp recession in 1992-93 led to protracted negative sustainability gaps that only abated with the (long-delayed) recovery in 1997-98.

FIGURE 1

SUSTAINABILITY OF GERMAN PUBLIC FINANCES WITH REFERENCE TO TOTAL BUDGET BALANCES (1988-2000)



Note: A positive (negative) 'sustainability gap' implies a falling (rising) debt ratio on account of the total deficit. Financial balance for 2000 excluding one-off revenues due to UMTS licenses.
Sources: OECD, *Economic Outlook*, no. 72, December 2002.

Another version of the above key relationship focuses on 'primary' balances (defined as net of interest payments on the public debt) and the debt ratio. Interpreted as a boundary relationship (cf. Pasinetti 1998a and 1998b), the amended version defines the sustainability area as:

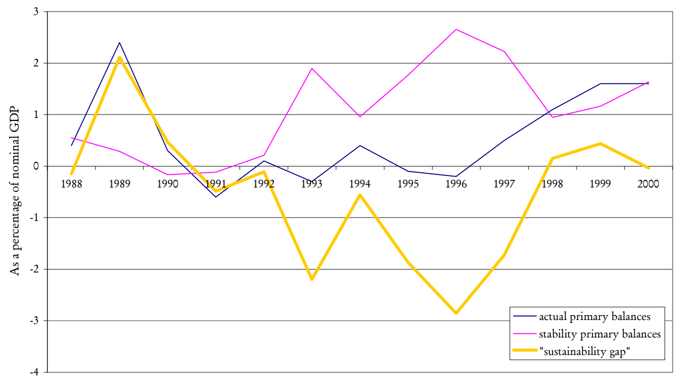
$$def^p \leq (i - g)\, d \tag{4}$$

This approach offers additional insights by highlighting the budgetary implications stemming directly from the difference between the interest rate and the economy's GDP growth rate. The greater this spread, the greater the 'burden of debt', i.e. the tax rate required to pay the interest on the debt (cf. Pasinetti 1997). To keep the overall tax burden constant and the debt ratio from rising, primary public expenditures would have to be cut when this critical 'growth spread' worsens, calling for a rising *primary* budget surplus. This problem is also aggravated as the level of the debt ratio rises.

Capturing the sustainability question in terms of primary balances, Figure 2 shows a drastic worsening of the growth spread during 1992-97. A sharp and sustained drop in GDP growth occurred in 1992-93, driving Germany into a trap. GDP growth got stuck well below the (implicit) Maastricht parameter of 5%, with interest rates anchored at significantly higher levels. An 'anti-growth spread', in turn, tends to set the debt ratio on a rising trend, confirming the previous result of unstable debt dynamics that only arose with the 1992-93 recession.

FIGURE 2

SUSTAINABILITY OF GERMAN PUBLIC FINANCES WITH REFERENCE TO PRIMARY BALANCES (1988-2000)



Note: A positive (negative) 'sustainability gap' implies a falling (rising) debt ratio on account of the interest burden. Primary balance for 2000 excluding one-off revenues due to UMTS licenses.
Source: OECD, *Economic Outlook*, no. 72, December 2002.

The trouble is that the key parameters in assessing the sustainability of public finances, the deficit and debt ratios, the rate of interest and the GDP growth rate are *not* independent. In particular, rising interest rates not only raise debt servicing costs. They also negatively impact GDP growth. Any negative effects on GDP growth would – most likely – be further magnified if budgetary attempts were made to cope with the rising interest burden and the fiscal repercussions of slower growth by cutting public expenditures and/or raising tax rates. In fact, a potential *inherent instability* emerges here as a rising debt ratio itself makes matters still worse, implying a rising interest burden. Clearly, any sound consolidation strategy has to be alert to these interdependencies and avoid disturbing any favourable constellation between the key parameters.

At this point we begin to get some insight into Germany's fiscal paradox of the 1990s. After six years of consolidation efforts starting from a deficit ratio of 2.9% in 1991, the deficit ratio finally improved to 2.6% in 1997. Germany thus took the fateful Maastricht hurdle that Finance Minister Theo Waigel had stubbornly assured his European colleagues prescribed not so much as one decimal point over 3.0%. Alas, Germany's debt ratio was still rising, for nominal GDP growth had been forced down to a rate as low as 2.2%! Perhaps, then, Domar's (1944) warning that choking off growth does not represent the proper way to lighten the burden of debt had not been taken all that seriously.

In conclusion, any need for consolidation in view of unification was non-existent for immediate concerns and probably small in the medium-term perspective. The 40% debt ratio existing at the time implies a sustainable 2.0 to 2.4% deficit ratio at a 5 to 6% nominal GDP growth rate. Alternatively, taking the 60% debt ratio in fact achieved by the end of the decade as the target, the actual budget deficit of less than 3% in 1991 was permissible even at 5% growth. A sizeable *positive* fiscal margin existed in 1991, and no continuation of real GDP growth of 4-5% as achieved from 1988 to 1991 was required. The issue here is the landslide recession of 1992-93 and the protracted mess that followed. The following analysis hypothesizes that avoiding massive job losses in western Germany and sustaining nominal GDP growth rates of 5 to 6% were both the order of the day and achievable through sound economic policies. The next two sections investigate why actual growth since 1992 has fallen well short of this, starting with the role of fiscal policy itself in Germany's fiscal paradox.

4. Automatic stabilizers and discretionary de-stabilizers: theory and German practice

The budget balance is an endogenous variable rather than a policy instrument proper as public finances and the economy are interdependent. Fiscal policy affects the levels of aggregate demand and economic activity. At the same time, the state of the economy is a key influence on the overall budgetary position. The budget balance may thus be decomposed as:

actual budget balance = f(output gap) + structural budget balance

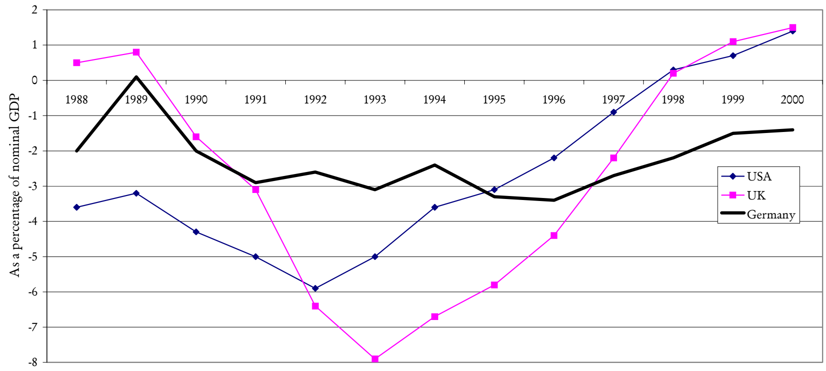
The first part of the right-hand side of the equation captures the effects of built-in stabilizers (or cyclical budget balances). They passively reduce the system's instability through automatic ('rule-based') cyclical movement. The second part is the hypothetical budgetary stance corresponding to potential output. A *change* in the structural balance is a measure of 'discretionary' fiscal stimuli. Whether such active measures that stimulate or retard aggregate demand through budgetary means over and above the economy's impact on the budget should be applied to stabilize the economy is controversial. Allowing the 'automatic stabilizers' to do their job, however, is universally seen as sound finance (Taylor 2000).

The previous section concluded that unification raised no immediate need for fiscal consolidation and that the expansionary fiscal stimuli over 1990-91 were in line with theory, representing a great opportunity for sustaining growth in Germany and Europe. This section assesses fiscal policy over the recessionary period from 1992 to 1997 in terms of theory and best practice. There is no a priori suggestion here that additional fiscal stimuli should have been applied as from 1992, since unification had largely run its course by that time. The question in hand is whether fiscal policy might have played any role in causing sluggish growth as from 1992. It is instructive here to take a look at the experience of other countries.

Both the US and the UK achieved budget surpluses toward the end of the 1990s, for which they were widely praised. As Figure 3 shows, the US started from a deficit ratio of more than 3% in 1989, the final year of the 1980s boom. With the 1990-91 recession, the deficit ratio had risen to nearly 6% by 1992.[8] In 1992, the US economy bounced back and the long upswing of the 1990s set in, with fiscal balances improving from 1993 onwards and running into surplus by 1998. By comparison, the UK started from a far more favourable position but, when hit by a severe recession in 1990, fiscal balances dramatically turned from surplus into a deficit reaching 8% of the GDP by 1993. And yet by 1998 the UK, too, was once again seeing a surplus.[9] Remarkably, Germany’s deficit ratio stayed at the 1991 level of around 3% until 1997. Germany had to wait until 1997-98 to see its public finances starting to improve, and the country ended the decade in a significantly worse state than the US and UK.

FIGURE 3

GENERAL GOVERNMENT FINANCIAL BALANCES
(1988-2000)



Note: Financial balances for Germany and UK in 2000 excluding one-off revenues from the sale of UMTS licences.

Source: OECD, *Economic Outlook*, no. 72, December 2002.

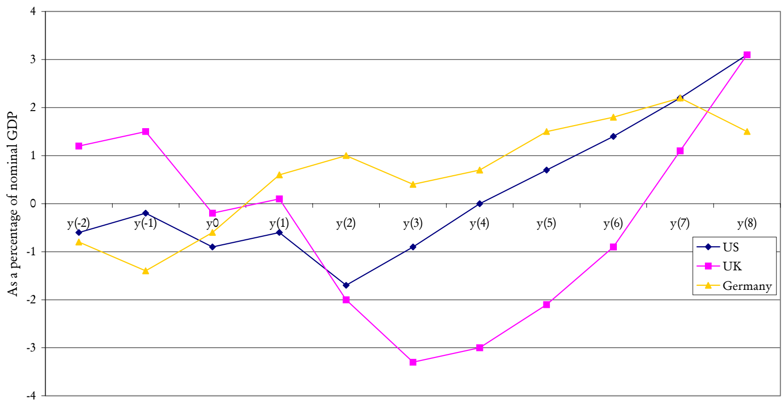
[8] The US’s fiscal conduct conflicted with the “Stability and Growth Pact” that forms part of the euro zone’s macroeconomic policy framework (Arestis, McCauley and Sayers 2001, Eichengreen 1996, Eichengreen and Wyplosz 1998). According to the pact rules, the US would have been penalized for its policies, particularly as the recession proved fairly mild. The pact was proposed in 1995 by the German Finance Minister Theo Waigel. Rumour has it that it was masterminded by the Bundesbank (cf. Tietmeyer 1991).

[9] In early 2000, Otmar Issing, the ECB’s chief economist who previously held the same position at the Bundesbank between 1990 and 1998, praised the UK as a role model of fiscal prudence, stating that he would welcome Britain joining the euro-zone as this would “add to peer pressure for sound fiscal policy” (*Financial Times*, 27 January 2000). If Britain’s fiscal policies are judged sound, the question arises why Mr Issing’s former employer put so much pressure on the German government to conduct fiscal policy contrari(un-)wise.

As countries were out-of-sync in the early 1990s, comparing their consolidation strategies on a *synchronized* basis highlights the crucial *timing factor*. The base year in Figure 4, y_0, refers to 1990 in the case of the US and UK, but to 1992 for Germany. Structural primary balances were allowed to deteriorate markedly (together with financial balances) when recession struck in the US and UK in 1990. As recovery took hold, structural deficits were again reduced (and financial balances, too). By contrast, *Germany embarked on cutting structural deficits in 1992, that is, at the onset of recession*. In addition to being untimely (Horn and Scheremet 1999), the fiscal tightening was also *unusually stringent*, both relative to Germany's own past experience and by international standards (Heilemann and Reinicke 1995). The budget did not improve, however, but remained stuck at the pre-recession level during years of sluggish growth. Essentially, deterioration in cyclical balances offset any improvement in structural balances.

FIGURE 4

SYNCHRONIZED GENERAL GOVERNMENT STRUCTURAL PRIMARY BALANCES
(Germany 1990-2000; US and UK 1988-98)



Note: Base year, y0, refers to 1990 in the US and UK cases, but to 1992 for Germany. Structural primary balance for Germany in 2000 excluding one-off revenues from the sale of UMTS licences.

Source: OECD, *Economic Outlook*, no. 72, December 2002.

It is reasonable to hypothesize that Germany, too, could have achieved a better economic performance over the 1990s – if fiscal policy had been more in line rather than in conflict with economic theory and best practice.[10] Taking a somewhat counterproductive route toward 'sound finance', consolidation failed in Germany as the destabilized economy (and cyclical balances) backfired on the budget.[11]

5. The role of monetary policy and the Bundesbank's so-called stability-orientation

When recession hit the US in 1990, the Fed promptly reduced real short-term interest rates to around 1%. As this proved insufficient to kick-start the economy, real short-term rates were cut further to around 0%. Ultra-easy money policy was continued until the economy bounced back to life, at which point the monetary stance was set to neutral.[12] In other words, not only was fiscal policy conducted in an anti-cyclical mode, but monetary policy was also flexibly framed to establish a policy mix that stimulated growth and, hence, paved the way to growth-based consolidation.[13]

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[10] Non-Keynesian effects are sometimes held to partly compensate or even overturn the contractionary effects of consolidation *in the short run*. The experiences of Denmark (1983-86) and Ireland (1987-89) are seen as proof of this possibility (Bertola and Drazen 1993, Giavazzi and Pagano 1990). Whatever may be the case in small countries, in larger countries sizeable confidence effects crucially hinge on very large fiscal imbalances and risk premiums on public bonds at the outset, i.e. non-issues in Germany. It is a different matter to what degree the monetary authorities might *choose* to accommodate fiscal retrenchment – the subject of the next section.

[11] Vittas (1995, p. 5) observes that the impact of the fiscal adjustment in 1992-93 coincided with "powerful offsetting effects of automatic stabilisers". Calculations due to Germany's wise men (using a different methodology and based on "Financial Statistics" rather than National Accounts) confirm the timing factor. Reductions in structural balances (excluding privatization revenues) were concentrated in those critical years between 1991-94. Privatization revenues then contributed significantly toward consolidation in the years 1994-98. The positive turn in the budget from 1996 to 1997 that allowed Germany to take the Maastricht 3.0% hurdle was largely due to faster growth – spurred by *export* demand. See SVR, *JG* 1998-99, Tables 52 and D2.

[12] When I describe the Fed as a 'quick' cutter, this is to be seen in comparison with the Bundesbank, for the Fed was severely criticized at the time for its overcautious pace, seen as causing the initially slow jobless recovery of the early 1990s. For a detailed account see Blinder and Yellen (2001).

[13] A comparison with the Bank of England is complicated by ERM membership up to the sterling crisis of September 1992. After the event, however, the UK experienced a drastic easing of monetary conditions through exchange devaluation accompanied by aggressive interest rate cuts. Interest rates were then raised again in line with economic recovery while the pound sterling has regained its strength since 1996.

The key facts about Bundesbank policies point in another direction. The ultra-tight stance established on the eve of unification peaked at real short-term rates of 5-6% as the economy cracked. Subsequent cuts were extraordinarily sluggish, briefly falling below 2% only by 1996-97. Conventional wisdom holds that tight money has mainly real effects in 'the short run'.[14] The problems may, however, become long-lasting if tight money is sustained long enough. Until spring 1996, interest rate easing was entirely offset by DM appreciation. In effect, the monetary condition established in late 1989 remained unchanged for the subsequent six years![15]

Headline CPI inflation was pushed down from its 4.0% peak in 1992 to close on zero by 1998-99, reflecting the Bundesbank's sole ambitions, while the US Federal Reserve appears to have been careful enough never even to try to drive inflation below 2% (Mankiw 2001). Price stability pursued in such an aggressive way does not come like a free lunch. The real consequences were as theory would predict: plunging with the 1992-93 recession, capacity utilization remained stuck at severely depressed levels for many years. Rather than accommodating the declared goal of fiscal consolidation so earnestly invoked, the Bundesbank's single-minded pursuit of price stability above all else further *magnified* the deflationary consequences of Germany's peculiar consolidation strategy embarked upon in 1992.

And all this was despite the fact that *market-determined* (or, core) inflation[16] remained virtually unchanged at its 2.5-3% level as the

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Arguably, being spared the Maastricht constraints, the UK was 'rewarded' for its sound and flexible macroeconomic management by an overvalued currency in the late 1990s (unbalancing the economy in subsequent years).

[14] Nevertheless, Bundesbank President Tietmeyer (1996) rejected outright James Tobin's accusation (see FAZ 1996) that the Bundesbank's one-sided preoccupation with inflation caused sluggish growth and unemployment.

[15] In his account of the ERM crises, Svensson (1994, p. 455) suggests that the "route to a deutsche mark revaluation turned out to be long and painful" because other EMS countries blocked the optimal policy of an early nominal DM revaluation as favoured by the Bundesbank. While this might suggest that the latter quite deliberately provoked the ERM crises to achieve its aim, the extraordinarily long span of ultra-tight money imposed would still be left unexplained (for a detailed analysis of Bundesbank policies see Bibow 2001a).

[16] The core and tax-push inflation measures used here are based on calculations by Weeber (1993, 1994, 1997 and 1998), providing the most comprehensive index of this kind available for western Germany between 1992-98. (Data for 1991 is based on calculations by Germany's wise men.) According to the Bundesbank, indirect taxes added about 0.5 percentage points to headline CPI inflation in 1991, implying that core inflation remained roughly stable from the years before. Heilemann and Jochimsen (1993, p. 29) argue that in 1992 "administrative price hikes caused a 1% increase in

allegedly inflexible and structurally handicapped German economy delivered GDP growth rates of 4 to 5% between 1988 and 1991. The minor rise in headline CPI inflation over 1991-92 was due to the policy inconsistency mentioned earlier: planned consolidation, undertaken under pressure from the Bundesbank, involved significant increases in indirect taxes and administered prices, which boosted headline inflation, the Bundesbank responding in turn with even tighter money. As the economy crumbled, the fiscal situation deteriorated, inducing pro-cyclical measures to get the budget under control. Apart from wrecking the economy, ever new rounds of 'tax push' kept headline inflation up, to be met with the Bundesbank's ongoing refusal to ease policy.

Thus, not only can it be said that unification posed no immediate threat of unstable debt dynamics, but indeed the fact of remarkably stable market-determined inflation also puts paid to the related idea of run-away inflation impending.[17] Another disturbing fact concerns Germany's infamously rigid labour markets. Despite the fact that by pushing up headline inflation, 'tax-push inflation' tends to drive up wages too, wage inflation peaked at comparable levels in Germany and the US. Since 1992 claims of excessive wage hikes have become even less tenable as western German wage inflation remained markedly below that of the US. Due to significant tax increases real disposable incomes fell for large parts of the population over the 1990s, making the observed degree of wage moderation even more remarkable. Alas, Germany suffered from persistently weak domestic demand and became extraordinarily dependent on export demand.[18]

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inflation, which gave wage claims an additional push of 0.5 to 0.7%". Heilemann and Reinicke (1995, p. 12) observe that "the increase in government-administered prices and social security contributions to finance unification led – along with increased housing rents – to a rise in inflation from less than 2.5% prior to unification to an average of 3.5% between 1990 and 1993". Cost pressures due to soaring social security contributions are excluded from the analysis here, but form an important part of the conventional wisdom about Germany's all-pervasive structural problems.

[17] Initially, this fear was related to the idea that a 'money overhang' might result from the conversion of East German marks, a myth rapidly debunked by Kregel (1991). Nevertheless, the monetary 'overshoots' of the early 1990s then fed new fuel to this fear. In actual fact, however, monetary growth only accelerated in the second half of 1991 as the Bundesbank's interest rate hikes led to a stark inversion of the yield curve that lasted until spring 1994, with monetary growth collapsing in due course (Bibow 1998).

[18] A related issue here is the euro's plunge which was really a continuation of the DM plunge that had started in the spring of 1996. Pronounced currency weakness

Perhaps Germany's stylized facts of vast job losses in downturns and lethargic job gains in upturns may have less to do with inflexible labour markets than with inflexible monetary policies. These policies not only failed to compensate for the effects of fiscal retrenchment, but actually magnified them. More appropriate macroeconomic policies would have been compatible with higher wage inflation, as investment and productivity growth would have been stronger in a less deflationary environment. The Fed's easy-money policies, embarked upon when inflation was still above 3%, sparked off the strong investment boom of the 1990s, which yielded productivity increases partly offsetting the (relatively higher) US wage growth with inflation *falling*. By contrast, Germany's peculiar policy mix proved doubly-counterproductive, with tax-push inflation backfiring even on the Bundesbank's 'primary' objective of price stability.

This is not the place to investigate the Bundesbank's deeper motives (see Hefeker 1994, Marsh 1992) and the peculiar institutional arrangements that made it the dominant player in economic policymaking. Jürgen von Hagen (1992, p. 215) puts it succinctly: "The Bundesbank gave a high priority to credibility considerations and chose a tight stance without too much regard to the risk of unnecessarily choking off the economic growth badly needed in the transition phase".[19]

6. Estimating the fiscal consequences of choking off economic growth

It is a widely held view that structural rigidities restrain Germany's growth *potential* as compared with that of the US, while blaming Germany's poor employment record on 'inflexible' labour markets is especially popular (Siebert 1997). And yet, in the face of negative

amounted to significant monetary easing through the exchange-rate channel that lent support to Germany's otherwise weak performance at the time – but it omens no good for the time when these imported growth stimuli are (as presumably they will be) reversed. Cf. Bibow (2001b and 2002).

[19] In view of this harsh verdict, it is puzzling that in a later critical assessment of fiscal policy during the 1990s von Hagen (with Strauch 1999) should exclude the role of monetary policy from any consideration.

output gaps and the stark finding that *actual* output in Germany fell persistently short of its allegedly low potential rate throughout the 1990s, the response of mainstream economic theory would be to look to fiscal and monetary policies.

In the light of the above analysis, I feel justified in hypothesizing that Germany would have performed less dismally if macroeconomic demand management since 1991 had been less unsound. Scenarios *a* and *b* modestly assume 5 and 6% nominal GDP growth since 1992, respectively. The former corresponds to West Germany's unimpressive record of the 1980s (and the implicit Maastricht parameter), while the latter is closer to West Germany's long-term historical record and US performance during the 1990s. The evolution of public finances under these two hypothetical growth scenarios may be simulated and compared with actual developments.

In fact, the effect of higher growth on the evolution of the debt ratio, *given the absolute level of debt actually accumulated*, does not even require simulation, but is easily calculated. It turns out that this consideration alone would have left Germany's debt ratio by the end of 2000 at 55% or less, rather than over 60%, lending further support to Domar's (1944) case for growth-based consolidation. But higher GDP growth would have had more beneficial effects than simply making any given absolute level of debt more bearable relative to some higher GDP level. In particular, higher GDP growth would have been accompanied by correspondingly higher tax revenues and lower government expenditures than was actually the case owing to sluggish growth and soaring unemployment in western Germany. Estimates of tax and expenditure elasticities for Germany imply that, as a rule of thumb, a 1% increase in GDP reduces the budget deficit by roughly 0,5% of the GDP (OECD 1999b).

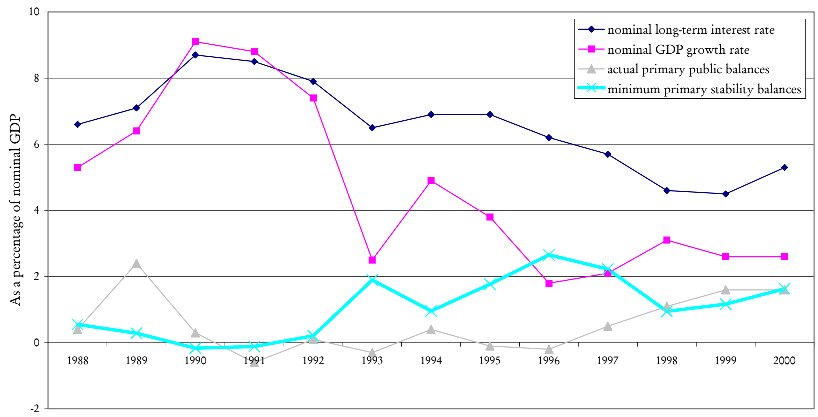
On the basis of this rule of thumb, hypothetical budget deficits may be simulated. It turns out that budget deficits would have been significantly smaller than maximum stability deficits throughout the period if 5% nominal GDP growth is assumed. This implies that current deficits would have led to a substantial decline in the debt ratio (roughly ten percentage points by the end of the 1990s).

Simulation of *ex ante* deficit reductions thereby confirms that extraordinarily severe fiscal tightening occurred after 1991. Alas, by choking off GDP growth, consolidation efforts failed to deliver the intended results. By implication, with a sound policy mix Germany could have been spared severe but ineffective fiscal tightening, and its public finances would still have been in a better shape today.

The key channel that low growth worked along to wreck public finances was soaring unemployment in western Germany. However, it is also instructive to focus on primary deficits and the interest burden. The Bundesbank (1997, p. 23) estimated that this factor added about 7.5 percentage points to Germany's debt ratio over 1992-96, referring to the "fact that a top-heavy interest rate-growth rate differential [was] the prevailing pattern worldwide". Nevertheless, while it is true that growth spreads collapsed in the wake of the early 1990s recession in the US, too, that country managed to re-establish a favourable growth spread in due course. It was Germany that got stuck in a 'top-heavy' trap (Figure 5). Closely allied government bond yields at starkly different economic growth rates have unpleasant fiscal implications – the interest burden soars requiring rising primary surpluses to keep the debt ratio from rising.

FIGURE 5

ATTEMPTED CONSOLIDATION AND GERMANY'S PROTRACTED ANTI-GROWTH SPREAD. SOARING INTEREST BURDEN REQUIRES RISING PRIMARY SURPLUSES



Note: Primary balance for 2000 excluding one-off UMTS revenues.
Source: OECD, *Economic Outlook*, no. 72, December 2002.

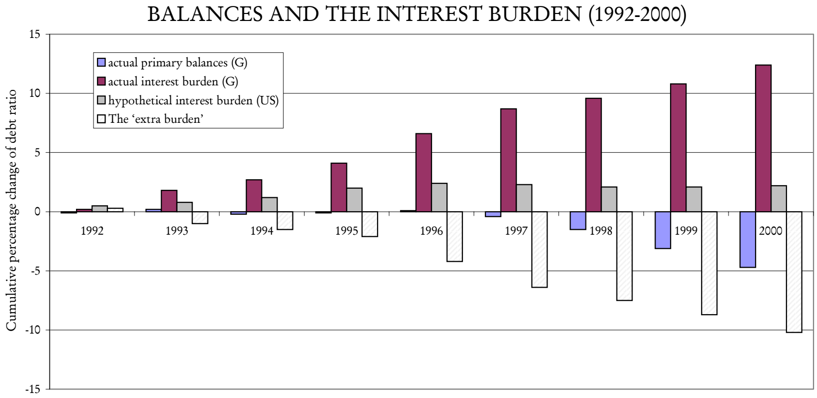
The interest burden effect and corresponding debt dynamics may be estimated in two steps. First, the change in the debt ratio may be divided into the contributions due to the primary budget balance and the (growth-adjusted) interest burden on the stock of debt of the previous period:

$$d_t - d_{t-1} = def_t^p + [(i - g)/(1 + g)]\, d_{t-1} \qquad (5)$$

Second, the evolution of Germany's public finances between 1992 and 2000 may then be recalculated on the basis of the US growth spread. Putting the allegedly prevailing worldwide pattern into perspective, Figure 6 reveals that the interest-burden gap between the US and Germany added an 'extra burden' of roughly ten percentage points to Germany's debt ratio over the course of the 1990s, directly attributable to the effects of a long run of tight money on the interest burden. As Domar (1944, p. 821, n. 43) cheerfully observed: "It is very amusing that those who appear most worried about the burden of the debt are usually least willing to advocate a lower interest rate on the debt!".

FIGURE 6

THE UNPLEASANT DEBT DYNAMICS OF GERMANY'S PROTRACTED ANTI-GROWTH SPREAD. CUMULATIVE CONTRIBUTIONS OF PRIMARY BALANCES AND THE INTEREST BURDEN (1992-2000)



Notes: The calculation of hypothetical burden is based on US interest rate/growth rate differential. The 'extra burden' shows the cumulative impact of Germany's peculiar 'top-heavy' position on its debt ratio.
Source: OECD, *Economic Outlook,* no. 72, December 2002.

7. So how heavy a fiscal burden did unification put on Germany's shoulders?

Germany's fiscal paradox of the 1990s thus has a clear-cut explanation: the collapse of GDP growth in western Germany. As a cross-check, the fiscal consequences of unification may now be estimated. According to the Bundesbank (1997, p. 19),

> "it can at least be said that more than half of the increase in the overall indebtedness of the central, regional and local authorities since 1989 (totalling about DM 1,200 billion) is attributable to reunification".

This amounts to attributing virtually the entire rise in Germany's debt ratio up to the end of 1996 to unification – an assertion that seems way off the mark.

The Bundesbank estimates that "inherited debts" added some 12.6 percentage points to Germany's debt ratio between 1990 and 1996 (by the end of which the increase in the public debt due to unification-related old debts had essentially run its course). The amount of inherited liabilities from the German Democratic Republic (GDR) are put at "approximately DM 340 billion". This is the indebtedness of the 'Redemption Fund for Inherited Liabilities' which by 1997 had assumed the debts of the 'Debt-Processing Fund', 'Treuhand Agency', east German housing enterprises, former GDR social institutions and 'equalization claims'. In addition, the Bundesbank (1997, p. 19) asserts that the

> "indebtedness of the east German Länder Governments and local authorities plus the new borrowing by the 'German Unity' [GU] Fund and the bulk of that by the ERP Special Fund since 1990 can be ascribed unambiguously to reunification"

– which amounted to additional borrowing of some DM 235 billion. The Bundesbank's calculations and assumptions deserve a closer look. First, transfers financed by GU Fund borrowing were already included in the net transfer estimates and their effects on the public finance position in Section 3. To avoid double-counting, they must not be included here as a stock-adjustment factor as well.[20] Second, the ERP Special Fund borrowing of some DM 27 billion after 1989 highlights another facet of Germany's peculiar policy inconsistency. For the Fund's role was to finance low-interest loans to the east German economy when, on the one hand, the Bundesbank hiked interest rates to engineer a 'stabilization crisis' while, on the other hand, the fiscal authority was keen to ensure that the investment desperately needed for eastern Germany's reconstruction and growth did not collapse under mounting financing costs. The consequences of tight money on public finances are clear-cut. To classify ERP Special Fund borrowing as 'unification-related' completely misses the point.[21]

Finally, it is moreover by no means self-evident that the borrowing of the east German Länder governments and local authorities pushed up Germany's debt ratio. Their borrowing might indeed have simply established 'normal' financial relations. In fact, by 1996, the east German Länder debt and interest expenditure ratios were below west German levels, as was their debt per inhabitant.[22] The question whether non-inherited debts pushed up Germany's debt ratio is far more complex than the Bundesbank makes it appear. The aspired policy goal was for eastern Germany to catch up with the West. It may well be the case that too little rather than too much deficit spending was undertaken by these authorities. It is simply unsafe to assume, as the Bundesbank seems to, that lower deficit spending would have left GDP unaffected. The point is that, like the budget balance, the debt ratio is not an exogenous variable.

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[20] The Bundesbank (1997, p. 22) puts the GU Fund's borrowing for transfers to the eastern Länder governments up to the end of 1994 at DM 95 billion from which it deducts DM 11 billion for redemptions effected up to 1997. The statistics of the German Finance Ministry put these transfers between 1991-94 at DM 75 billion (including all credit-financed transfers but not subsidies by the Federal and Western Länder).

[21] In attributing about 12.6 percentage points (or DM 444 billion of Germany's GDP of 1996 of DM 3524 billion – based on ESA 1979 conventions valid at the time) of Germany's debt ratio of 1996 to assumed debts, the Bundesbank seems to have treated only the debts incurred by the GU Fund as inherited debts. If the ERP Special Fund's borrowing of some DM 27 billion were added as well, the margin would be too small in view of the 7.5 percentage points the Bundesbank decided to attribute to the interest burden.

[22] By the end of 1996, the East German Länder governments and local authorities had borrowed DM 141 billion, while their GDP (including East Berlin) stood at DM 413 billion (SVR, *JG* 1998-99, p. 341).

Germany's fiscal paradox illustrates the point. With the budgetary position West Germany had attained before unification it would have been possible either to *cut* taxes at the 40% debt ratio established at the time, or to set the debt ratio on a declining trend. This menu clearly changed with unification, as reflected in the budgetary swing between 1989 and 1991. And yet, when attempts were made to rein in deficit spending by means of ill-timed, excessive fiscal tightening combined with tight money, the budgetary position worsened. The government was successful in cutting public investment expenditures, but spending related to unemployment in western Germany and the interest burden soared – as GDP growth collapsed and public revenues shrank accordingly. Above we emphasized tax-push inflation as one of the consequences of measures taken to rein in the deficit. Other measures were hikes in direct taxes and social security contributions, which had those very consequences that are today widely referred to as Germany's structural problems, namely high (non-wage) labour costs and disincentives to work and hire. In short, ill-guided macroeconomic policies may backfire on deficit and debt ratios (and much else besides) in deep-reaching ways.

It seems more appropriate to estimate the fiscal 'burden' of unification by directly focusing on net fiscal transfer flows on the one hand, and stock adjustments due to inherited debts on the other, the former to be seen in relation to western German GDP, the latter in relation to All-German GDP. Table 2 shows the evolution of these two ratios under actual and hypothetical growth scenarios, respectively. If economic policies had allowed a more benign growth scenario, the fiscal burden due to transfers would have shrunk to roughly 3.5% by 1999.[23] Stock adjustments due to inherited debts of DM 365 billion (including redemptions effected until 1997 and the debts of the 'Indemnification Fund') would have pushed up the debt ratio by roughly 8 percentage points. This amounts to roughly a third of the actual rise, which would have raised the interest burden on the debt by roughly 0.5% of GDP.

The two unambiguously unification-related factors confirm that unification posed a formidable fiscal challenge. To get its own unified

[23] Let me recall here that net transfers are estimated in a way that takes only partial account of the *self-financing effects of deficit spending*. Furthermore, there can be little doubt that higher growth in the West would have raised growth in the East as well, thereby reducing the volume of transfers required.

future on track and keep it there, a non-negligible 'price' had to be paid. The fiscal options available before the event were clearly obsolete. Instead, if the objective had been to stabilize the debt ratio at, say, 50% (assuming that any rise due to inherited debts plus some slippage was unavoidable), some limited degree of consolidation may have been required – not immediately, perhaps, but in the longer term. Alas, this inevitable 'price' was raised out of all proportion by the policies chosen to cope with the historical challenge. A great opportunity was missed and the actual fiscal tightening of the 1990s turned out to be far in excess of any 'burden' of unification proper.

The crucial point is that the debt ratio soared above the inevitable precisely because ill-guided attempts were made to keep it too low. And the actual fiscal tightening undertaken, while failing to keep the debt ratio from rising, proved excessive precisely because fiscal policy was ill-timed and unaccountably ambitious, desperately trying to catch up on the fiscal damage that western Germany's collapsing growth inflicted on the budget, and all along accompanied by counterproductively tight monetary policies.

Scrutinizing the gravity of unambiguously unification-related factors confirms our account of Germany's fiscal paradox of the 1990s. On top of unification-related transfers (job losses in the East, in particular) and inherited debts, there were also the fiscal consequences of sluggish growth and roughly 1.5 million job losses in the West.

This extra burden was not only far from inevitable; given the disparities between East and West in relative economic size and income levels, it weighed even heavier than the inevitable burden that had in any case to be shouldered in the East. And one may surely hypothesize that a less dismal economic performance by western Germany would have proved beneficial for eastern Germany's transformation too – and vice versa (Heilemann and Rappen 2000).

8. Conclusions

According to the Bundesbank (1997, p. 17):

> "Public debt has soared [in Germany] since the beginning of the nineties, mainly because of the fiscal consequences of German unification. Although part of the expenditure incurred in integrating

Tab. 2 orizz.

> the new Länder was financed by raising taxes and social security contributions and by cutting spending, particularly in the case of the Federal Government, substantial recourse was had to borrowing. However, increasing government indebtedness, as a partial response to the massive challenge posed by unification, is justifiable only for a limited period. Otherwise, there is a danger that the state might fall into a debt trap in which the budget deficit and the accumulated debt level become self-fuelling as a result of the rapidly growing interest payment burdens. In order to avoid such a development, the adopted course of fiscal consolidation has to be strictly maintained".

It is hard to deny that throughout the 1990s, the Bundesbank – wielding powers in German economic policymaking that reached well beyond the conduct of monetary policy – was the primary source of pressure for strict pursuance of fiscal consolidation *at any price*. And yet, the rise in public indebtedness and protracted budget deficits which have plagued Germany since unification might even suggest that fiscal consolidation was pursued only belatedly and still not aggressively enough.

The analysis presented in this paper suggests otherwise, highlighting that Germany pursued macroeconomic policies in response to unification that were in conflict with both economic theory and best practice. It is not, however, the initial deliberate recourse to *ex ante* deficit spending that is to be blamed. If anything, the sharp rise in deficit spending in 1990-91 stands out as the one aspect of fiscal policy that was indeed inevitable, and also not out of line with theory. The fiscal boost, a budgetary swing from a balanced budget to a 3% deficit, neither caused unstable debt dynamics, nor posed any inflationary threat. Rather, it stabilized Germany's economy at a time when the world economy was tottering. Given sufficient slack both at home and abroad, strong German domestic demand growth was thus non-inflationary – at the outset.

Problems only arose with the ill-timed and unaccountably ambitious fiscal consolidation embarked upon in 1992, which was ill-prepared for by the Bundesbank's severe monetary tightening the year before, establishing a long span of extraordinarily tight money that lasted until 1996. This policy mix was needed, in the central bank's view, in order to maintain price stability. Ironically, the Bundesbank's deflationary quest actually proved *inflationary* at the most critical stage. And the overall fiscal tightening and deterioration of public finances that occurred over the 1990s turned out *far in excess* of what unification itself might have required, for consolidation attempts backfired badly once unsound policies had destabilized western Germany. Provoking ever new rounds of tax and social security contribution hikes, and hence creating structural problems apart from constraining domestic demand, consolidation set in motion a deflationary spiral with peculiar inflationary side-effects.

Whatever may be the case with its labour market institutions, it is in its approach to macroeconomic policymaking that Germany is truly hamstrung by deep-seated rigidities – by doctrines and beliefs that starkly conflict with economic theory and best practice. The dismal results of the Great German Deflation of the 1990s cannot be blamed on unification, nor do they represent any burden deriving from it. They are the consequences of ill-guided macroeconomic policies. Germany's dismal record of the 1990s was the perfectly unnecessary consequence of deflationary macroeconomic policies conducted under the Bundesbank's dictate – with some unfortunate ramifications beyond Germany's borders, too.

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