

ECONOMIC PAPERS

**COMMISSION OF THE EUROPEAN COMMUNITIES
DIRECTORATE-GENERAL FOR ECONOMIC AND FINANCIAL AFFAIRS**

Number 91

April 1992

**The German Economy after Unification:
Domestic and European Aspects**

Jürgen Kröger / Manfred Teutemann*



"Economic Papers" are written by the Staff of the Directorate-General for Economic and Financial Affairs, or by experts working in association with them. The "Papers" are intended to increase awareness of the technical work being done by the staff and to seek comments and suggestions for further analyses. They may not be quoted without authorisation. Views expressed represent exclusively the positions of the author and do not necessarily correspond with those of the Commission of the European Communities. Comments and enquiries should be addressed to:

The Directorate-General for Economic and Financial Affairs,
Commission of the European Communities,
200, rue de la Loi
1049 Brussels, Belgium

ECONOMIC PAPERS

Number 91

April 1992

The German Economy after Unification: Domestic and European Aspects

Jürgen Kröger / Manfred Teutemann*

* The authors are economists in the Directorate for National Economies of DGII of the Commission of the European Communities. The views expressed can only be attributed to the authors.

THE GERMAN ECONOMY AFTER UNIFICATION.

Domestic and European aspects.

Page

Introduction

1.	CONSEQUENCES AND PROSPECTS FOR EAST GERMANY.....	1
1.	On the road to unification.....	1
2.	The economic approach to unification: three simultaneous shocks and no transition period.....	3
3.	Economic consequences to date for East Germany.....	6
3.1	The adjustment of output.....	7
3.2	The adjustment of employment.....	10
3.3	The adjustment of wages and prices.....	11
3.4	The adjustment of the saving-investment balance and the current account.....	11
4.	The need to establish a favourable economic-policy framework.....	14
4.1	Managing mass unemployment.....	16
4.2	Attracting private risk capital and privatization.....	19
4.3	Balancing public finances and stabilizing purchasing power.....	22
4.4	Regulations, subsidies and supply-side policy.....	23
II.	CHANGED PATTERN OF THE GERMAN ECONOMY.....	26
1.	Introduction.....	26

2.	Demand and supply dynamics after unification.....	27
2.1	The regional perspective.....	27
2.2	The sectoral perspective.....	29
3.	Impact on economic policy.....	31
3.1	Monetary policy.....	31
3.2	Fiscal policy.....	35
3.3	Labour market : wage determinants	45
3.4	Structural policy.....	48
4.	The issue of redistribution.....	50
III.	THE UNITED GERMANY IN EUROPE : ECONOMIC ASPECTS.....	55
1.	Introduction.....	55
2.	Short and medium-term effects on the Community economy.....	56
2.1	Demand effects.....	56
2.2	Monetary effects.....	58
2.3	Medium-term effects.....	60
3.	Aspects of European economic integration.....	62
3.1	Economic imbalances, the convergence process and EMU.....	62
3.2	United Germany and the internal market.....	65
3.3	Investment needs and catching-up of peripheral Community countries.....	66
4.	Lessons for Europe.....	67
4.1	German unification and western European integration.....	67
4.2	German unification and eastern European transformation.....	69
	References.....	74

Table 1	Output and productivity in East Germany	7
Table 2	The external performance of East Germany	14
Table 3	Sectoral investment–saving balances in East Germany	15
Table 4	German import performance after unification	56
Table 5	Short–term effects of German unification for partner countries	58
Graph 1	East German trade balance	5
Graph 2	Industrial production in East Germany	8
Graph 3	East German labour market developments	10
Graph 4	East German inflation performance	12
Graph 5	Migration and wage–differential trade–offs	47
Graph 6	Short and long–term interest rates in Germany 1990–1991	59
Graph 7	Movements in German and French interest rates – a comparison	60
Box 1	Chronology of major events	4
Box 2	Major investment–supporting measures in East Germany	20
Box 3	Monetary implications of different development trends in East Germany – a stylized view.	34
Box 4	Incorporating the five new Länder in the West German revenue–sharing system.	39
Box 5	Medium–term prospects for public finance	44
Box 6	Tariffs and subsidies versus the exchange–rate instrument – stylized view on potential policy choices for Eastern European economies.	71

Introduction

German unification has not only changed the political and economic landscape in Germany but also in Europe with major repercussions on the western European integration process. Major swings in economic demand dynamics and economic policy disturbances in Germany following economic, monetary and social union since mid-1990 spilled over to partner countries and changed traditional positions in economic performance.

This paper tries to analyse and assess the changes and their implications for the German economy and the EC. In part I a description and assessment of economic consequences of unification for East Germany is given, covering the adjustment processes for output, the labour market, price and wage setting and the dramatic change in the external performance and public finance of East Germany. This is followed by some proposals which could form part of a remedy for dealing with the collapse of the East German economy. The proposals cover labour market and capital stock issues as well as recommendations for fiscal policy and supply side policy in unified Germany.

Part II analyses the changed pattern of the German economy. Special attention is given to the paradigm in fiscal policy, and the unsolved redistribution question which is leading to a very problematic policy mix, with negative repercussions for growth and economic momentum in both Germany and Europe.

Part III focuses on short and medium-term effects on the Community economy. Both the positive demand effects (higher exports to Germany) and the negative monetary effects (higher interest rates throughout Europe) are dealt with. Attention is also given to probable consequences of German unification for the process of European economic integration. The paper concludes with a short assessment of how far lessons can be drawn from the experience with German unification for both Western European integration and Eastern European transformation.

1. CONSEQUENCES AND PROSPECTS FOR EAST GERMANY

1. On the road to unification

The opening of Hungary's western border in mid-1989 was the trigger for dramatic changes not only in Germany but throughout Europe. Within months, the migration of thousands of East German citizens to West Germany, at first via Hungary but later via Czechoslovakia and Poland also, led to the fall of the Berlin Wall and ultimately to the overthrow of the communist regime in East Germany. Within three weeks of the fall of the Berlin Wall, Chancellor Kohl outlined his vision of a gradual evolution of common institutions between the FRG and the GDR, leading to a federation of the two German states. On 6 February 1990, the Chancellor proposed negotiations on the creation of a monetary union which began in the following month¹.

It was the rapidly accelerating migration from East to West Germany which provided the main impetus to early unification.² The scale of migration flows was explained by two main factors. Firstly, the younger and more highly skilled members of the East German labour force perceived an opportunity to obtain a well-paid job in West Germany; this would facilitate almost immediate access to the wealth of the West German economy. Secondly, migrants from the East were legally entitled to support from a very generous system of public allowances on taking up residence in West Germany (e.g. integration allowances, unemployment and other social security benefits, public accommodation). The transaction costs of emigrating from East to West Germany were low relative to the potential economic benefits so that the risks attached to migration were not very significant.

Being unable to cope with successful economic restructuring and having no credibility regarding a hard currency regime of their own, the East German government under Krenz and Modrow, but also the East German parliament, hoped for an economic bailing-out by West Germany by early 1990. However, urgent demands from the East German parliament to provide

1 This proposal came under heavy attack from West German politicians, the Bundesbank and also the academic scene. Compare e.g. Sachverständigenrat 1990).

2 See for more information on this : Mayer (1990).

DM 13bn to East Germany to start an envisaged restructuring programme were refused by the West German government. Only the currency funds providing "welcome money" for East German visitors were augmented to DM 3 bn. Obviously, West Germany was not willing to bail the GDR out without a change of regime and a transfer of economic policy competences to West German institutions.

After the change of political regime in the GDR in March 1990 (in the general elections of 18 March, the CDU obtained an overwhelming majority as the party favouring full unification at the earliest possible date), the first state treaty between East and West Germany was negotiated; this provided for the creation of a monetary, economic and social union effective from 1 July 1990. The treaty made the D-Mark the sole legal tender in East Germany and assigned responsibility for East German economic policy to West German authorities (Bundesbank, Ministry of Finance, Ministry of Economics, Ministry of Labour and Social Affairs). Financial support for East Germany was also provided through the German Unity Fund, which is designed to channel public transfers of DM 120bn to East Germany over the five-year period 1990-94.

The state treaty was the first and most important step towards merging the respective economies and ultimately the political systems of the two German states. In fact, German economic, monetary and social union was conceivable only against the background of an anticipated political unification. The signing of the Unification Treaty (31 August 1990) and the accession of the newly created East German Länder to the FRG on the basis of Article 23 of the Basic Law (3 October 1990) completed the unification process in legal and institutional terms. However, integration of the East German economy in terms of living standards, per capita income and the quality of the public and private capital stock remains a major challenge.

2. *The economic approach to unification: three simultaneous shocks and no transitional period*

The chosen approach to unification was to expose the East German economy³ to three "big bangs": (i) the immediate abolition of protectionist instruments as a consequence of economic and monetary union, (ii) the sudden and complete integration of the East and West German labour markets as restrictions on migration were lifted, and (iii) the imposition of the legal and institutional framework of a developed market economy as a consequence of political unification.

While the effect of monetary union on nominal stability in Germany was extensively discussed, the implications for the real economy were more significant. The factor which had the greatest impact on East German output and employment was the sudden abolition of state controls on trade accompanied by the replacement of the non-convertible Ostmark with a fully convertible and overvalued (in relation to East German productivity) D-Mark.⁴ Overnight, East Germany was transformed from an economy characterized by repressed inflation to a market-oriented economy where demand for poor-quality domestic output virtually collapsed in the face of competition from West German imports.

Not surprisingly, the heavily administered external trade system was ill-suited to the new market environment.⁵ Hard-currency imports soared because of changing preferences and the much wider availability of D-Marks; meanwhile, exports to Western countries remained negligible. The abrupt collapse of the centrally planned trading system also reflected low demand for exports from the Comecon countries and the fact

3 An analysis and assessment of the East German economy on the eve of unification can be found in DIW (1990), Mayer/Thumann (1990), OECD (1991), Sachverständigenrat (1990a), Sachverständigenrat (1990b).

4 This shift of domestic demand was generally underestimated by most economic analysts as they limited net imports to absorption capacities as a result of direct investment in the course of a catching-up scenario. See e.g. OECD (1990).

5 See for an analysis of the East German trade performance before and after unification Hoffmann et al. (1991).

Box 1 : Chronology of major events

1989

- 9 November The Berlin wall was opened for East German citizens after a few months of political crisis and the fleeing of several thousands via Hungary and Czechoslovakia.
- 28 November Chancellor Kohl, in a major speech dealing with the division of Europe and Germany announced a ten-point programme envisaging the progressive creation of common policy institutions between the FRG and GDR leading to an eventual federation of the two German states.

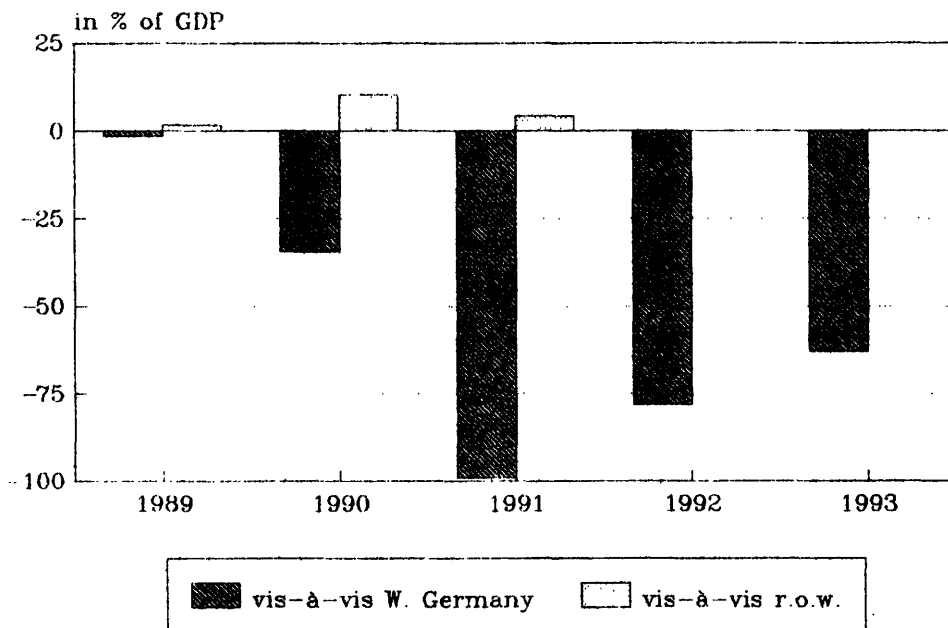
1990

- 6 February Faced with an accelerating pace of migration to the Federal Republic, Chancellor Kohl proposed to hold negotiations with the East German government on the creation of a monetary union.
- 18 March General elections held in East Germany giving an overwhelming majority to the CDU and the parties favouring a rapid monetary and economic union followed by a full unification at the earliest possible date.
- 12 April Mr de Maizière formed the first freely-elected Government in more than 40 years with participation of most parties.
- 6 May Local elections in the GDR.
- 18 May The Treaty creating a monetary, economic and social union effective 1 July, was signed by the Governments of the GDR and FRG.
- 17 June The East German parliament voted the "Treuhandgesetz" which subsequently was made an integral part of the unification Treaty.
- 1 July The Deutschemark was introduced as the sole legal tender in the two Germanys on the 1 July
- 22 July The East German Parliament passed the Law reintroducing the five former States.
- 23 August The East German Parliament voted to seek accession to the FRG on the basis of Article 23 of the Basic Law.
- 31 August The "Unification Treaty" signed by the two Governments.
- 12 September The "2+4" Treaty signed in Moscow.
- 3 October The German Democratic Republic ceased to exist on the 3 October 1990 and the Basic Law was extended to the entire German area.
- 2 December First post-war general elections in unified Germany giving a majority to the liberal conservative parties CDU, CSU and FDP which promised that "no tax increases will be needed to finance German unification" and that "nobody will be worse off but a lot of people will feel better off after unification".
- 31 December The transferable rouble system for trade among eastern European countries expires, leading to almost a total halt of East German exports to these countries.

Source : compare OECD (1991).

that exports from East Germany to these countries had to be paid for in hard currency. Consequently, the East German trade balance, which was almost in equilibrium in 1989, showed a deficit of about DM 120bn (70% of East German GDP over the first 12 months after monetary union).

Graph 1
East German trade balance
- goods and services -



Source: Commission Forecast (Nov 1991)

In considering possible alternatives to the approach chosen by the German governments, one must examine the objectives to be achieved.⁶ From an economic viewpoint, the objectives were to control migration, to transform a centrally planned economy into a market economy, to integrate the East German economy into the world market and to foster growth in output and per capita income in East Germany. In contrast to the immediate creation of a monetary union, such objectives could have been achieved by (i) the abolition of mobility incentives (or the introduction of mobility disincentives), thereby reducing labour-market integration, (ii) the introduction of tradable property rights and of a market-based pricing system, (iii) the introduction of a separate convertible currency for East Germany, thereby increasing the possibility of compensating for an inappropriate product mix and low labour productivity relative to the

⁶ See also : OECD (1990), Tietmeyer (1991).

exchange rate, and (iv) a boost to public investment with the help of public transfers in order to increase the attractiveness of East Germany as a location for private investment. However, the drive towards rapid political unification virtually precluded discussion of alternative strategies.

As the actual approach has been quite different, it must have also served other than strictly economic goals. Indeed, economic and monetary union had been justified only by rapid political unification. Public-choice considerations lead to the hypothesis that the actual approach was the appropriate strategy to achieve rapid political unification. As a matter of fact, the actual approach proved to everybody quite clearly that the East German authorities were not at all able to cope with the enormous economic-policy challenge of transforming the East German economy. Also as a consequence of the dramatic collapse in economic activity, East German politicians were prepared not only to speed up the unification process but also to aim at rapid unification on the basis of Article 23 of the Basic Law, i.e. unification by a self-liquidation of the GDR political system.

3. *Economic consequences to date for East Germany*

With the opening of the border, East German producers lost virtually their entire domestic market overnight.⁷ Trade deflection from East to West Germany quickly reached very high levels, while East German retailers began to substitute West German for East German goods. As a result, the unprepared East German producers were quickly reduced to bankruptcy. A further slump in domestic production followed the transformation of Eastern European trade relations from a system of (non-convertible) transferable roubles to a hard-currency system and was intensified by the disappearance of state regulations on trade and by the lack of hard currency in other Eastern European countries. On a genuine market basis, exports of East German products to Eastern European countries collapsed almost completely after January 1991.

⁷ For an early discussion of the implications of unification for the East German economy, see Kröger (1990). See also Morgan Guaranty (1991).

3.1 The adjustment of output

Empirical evidence based on estimates by private-sector institutions⁸ (such as the Berlin-based DIW)⁹ and other indicators (such as production indices, retail-sales turnover, the evolution of the external balance vis-à-vis West Germany, and labour market data) clearly indicate a severe slump in output. In 1990, the decline in GDP volume may have been about 15% and a further decline of as much as 25% is likely to have occurred in 1991.

TABLE 1: OUTPUT AND PRODUCTIVITY IN EAST GERMANY

	1989	1990	1991	1992	1993
GDP (nominal, bn DM)	234	178	159	213	262
GDP growth (real)	:	-19	-20	7	9
GDP deflator (% change)	:	-6	12	25	13
Productivity/head (% change)*	:	-9	13	13	9
- In % of West German productivity*	32	29	32	36	38

* 50 % of all short-time workers are treated as actually unemployed.

Source : Commission forecast (Nov. 1991)

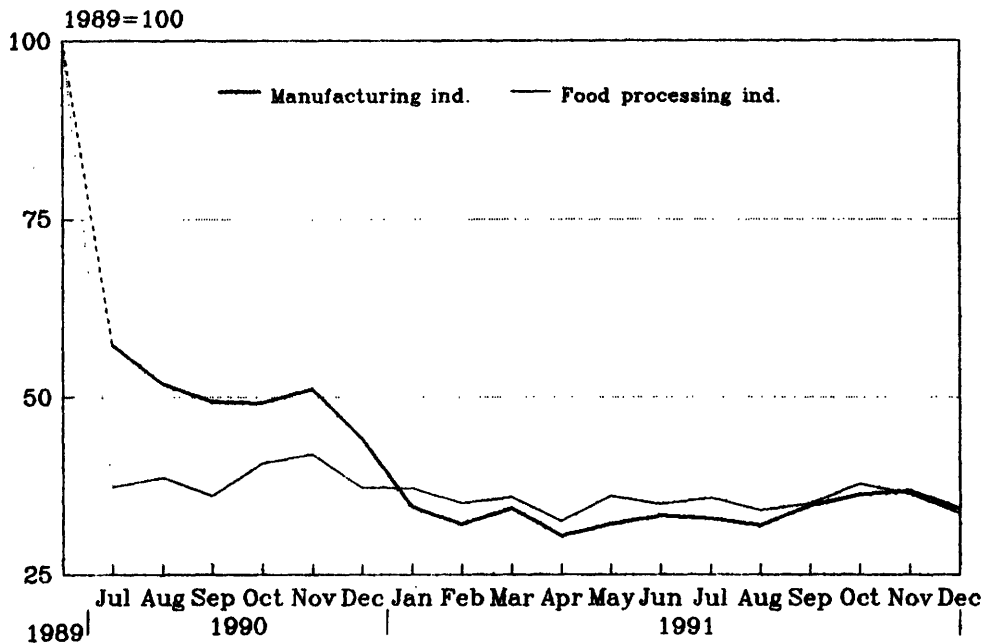
The abrupt shift in demand to imported products and the collapse of export markets in Eastern Europe have led to a dramatic fall in industrial production; gross value added in industry still represented more than 44% of total gross value added in the second half of 1990 (West Germany: 40.5%). By late summer 1991, the level of production seemed to have stabilized at about one third of that recorded before monetary union. On the one hand, output of consumer goods for the domestic market (e.g. food and textiles) collapsed immediately after the introduction of the D-Mark to some 30%-40% of its earlier level. On the other hand, output of investment goods and exports declined by "only" 20%-30% in the

⁸ Official national accounts figures for East Germany do not show the slump in output as a result of currency union, since the statistical office has not expressed existing national accounts figures for earlier periods in terms of D-Marks.

⁹ See e.g. DIW (1-2/1992) or the quarterly reports of the DIW in cooperation with the Institut für Weltwirtschaft on "macroeconomic and entrepreneurial adjustment processes in East Germany" (DIW 12/1991, 24/1991, 39-40/1991 and 51-52/1991).

Initial phase of monetary union; these industries could still sell their products within the transferable-ruble system until the end of 1990 and thus were not affected to the same extent by monetary union. However, the transferable-ruble system was abolished in January 1991 and the suppliers of investment goods were then also exposed to hard-currency competition. Consequently, the fall in output of investment goods was postponed for only about six months and output dropped to about 30% of its previous level in early 1991. Even these remaining exports rely to a considerable extent on newly introduced subsidies which particularly favour exports to the Soviet Union.

Graph 2
Industrial production



Source: Statistisches Bundesamt

Adjustments in the agricultural sector primarily reflect the integration of a centrally planned sector, organized like an industry, into the Community's Common Agricultural Policy (CAP) and the West German agricultural policy framework. As the CAP is also highly regulated, East German agriculture was less dramatically affected by the introduction of a convertible currency. However, output slumped for different reasons. Firstly, the collapse of the old regime left behind a vacuum, leading not only to a breakdown in the traditional distribution system but also to liquidity problems. Before market interventions under the CAP could be made, the loss of domestic markets and depressed agricultural incomes

resulted in a sharp fall in employment in this heavily overmanned sector. Gross value added in agriculture is estimated to have plunged by almost 50% in the second half of 1990. Secondly, the transformation of this sector from collectives to small and medium-sized farms was hindered by East German farmers' unwillingness or inability to accept entrepreneurial risks because of unclear property rights and a shortage of liquidity. Thus, the typical response has been to reduce agricultural activity by participating in set-aside programmes and by leasing land and farms to western investors. Finally, Community Intervention prices are lower than those applying under the previous regime. Early indications now suggest that agricultural output is about to stabilize at existing levels while the transformation to a structure in line with national and EC regulations and policy objectives is continuing slowly.

The East German construction sector has been affected by the removal of centralized control of supply and demand and by enormous liquidity constraints on potential (private and public) investors. Nevertheless, construction activity has declined by only about 5%, mainly as a result of reduced residential investment. The outlook for construction activity, which has been identified as potentially the main source of recovery for the East German economy, is very promising. New public orders rose sharply as a consequence of the Economic Revival Programme for East Germany. However, residential construction is still restrained by severe liquidity constraints. Moreover, capacity problems may soon emerge as both the capital stock and the labour force are adjusting only slowly to the new demand profile.

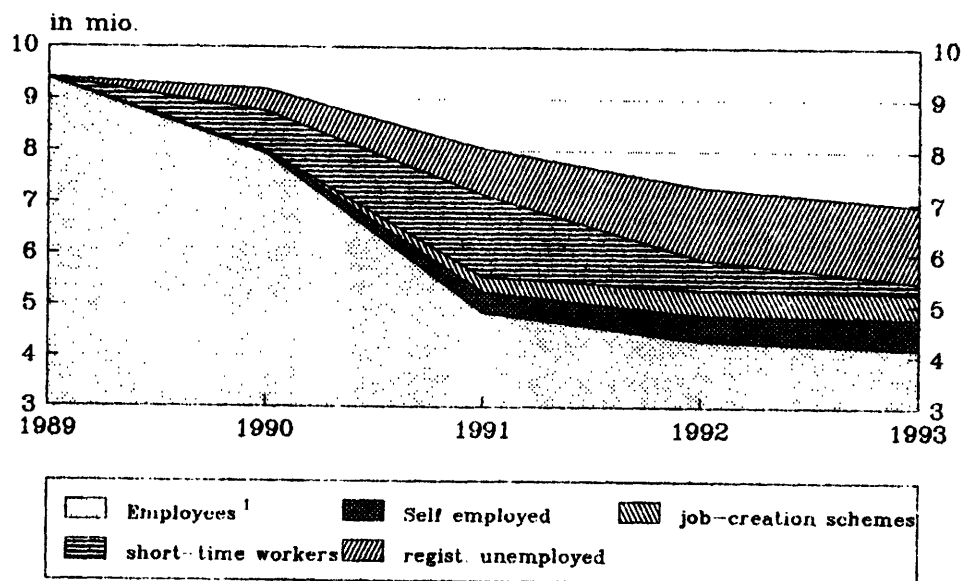
On a disaggregated basis, the economic performance of the services sector has been variable. Developments are promising in areas traditionally underdeveloped in communist economies (e.g. the financial sector and liberal professions). Other services have suffered on account of the difficulties in manufacturing, gloomy macroeconomic prospects and the relatively low income levels of private households compared to sharply increased prices. Furthermore, the turnover of East German retailers has been adversely affected by ~~trade~~ deflection across the old border and by mail-order sales.

3.2 The adjustment of employment

The East German labour market is, at present, under pressure from three sources. Firstly, plunging output due to the loss of both domestic and export markets implies a corresponding reduction in employment, mainly in manufacturing. Secondly, the shift from inefficient central planning to more efficient market-oriented management and production methods is also likely to reduce employment significantly in all sectors. The structure of East German employment was clearly not based on an efficient allocation of resources, and the scope for increased productivity through a rationalization of labour must be exploited. Finally, East German wage formation is less related to the productivity and profitability of East German enterprises than to wage developments in West Germany; this implies a rapid catching-up of East German wage levels. Therefore, the reorganization of existing enterprises may prove more costly in terms of job losses than was originally anticipated.

Total employment has already dropped quite dramatically, pushing the number of registered unemployed and short-time workers to almost 30% of

Graph 3
Labour market developments
- domestic concept -



¹ excl. short-time workers and job-creation schemes

Source: Commission forecast (Nov 1991)

the labour force in 1989.¹⁰ However, the adjustment in employment is by no means complete. With GDP volume falling by about 40% between end-1989 and end-1991 and given the need for sharp productivity improvements within surviving East German enterprises, a reduction in employment of between 4 and 5 million jobs may occur before the hoped-for recovery of output reverses the overall employment trend.

Job losses will be concentrated in manufacturing industry but will also occur in the agricultural and non-market sectors. On the other hand, job creation as a result of expansion in the services sector could offset or even exceed job losses in manufacturing. With respect to the overstuffed public sector, a substantial rationalization of the labour force is unlikely for administrative, legal and political reasons. Furthermore, the implementation of West German laws and procedures requires a training and transitional period for existing staff implying reduced "productivity". Finally, the legacy of the former communist administration, e.g. the resolution of numerous disputes over property rights, will require additional public-sector employees. Therefore, public-sector employment may remain fairly high during a longer transitional period.

3.3 The adjustment of wages and prices

In the old GDR, prices and wages were determined not by demand-supply conditions but by political considerations. While prices for basic goods and services (food, housing, energy, etc.) were heavily subsidized, most other products were subject to very high luxury taxes and production levies designed to constrain demand to prevailing levels of supply and to finance subsidies in other fields.

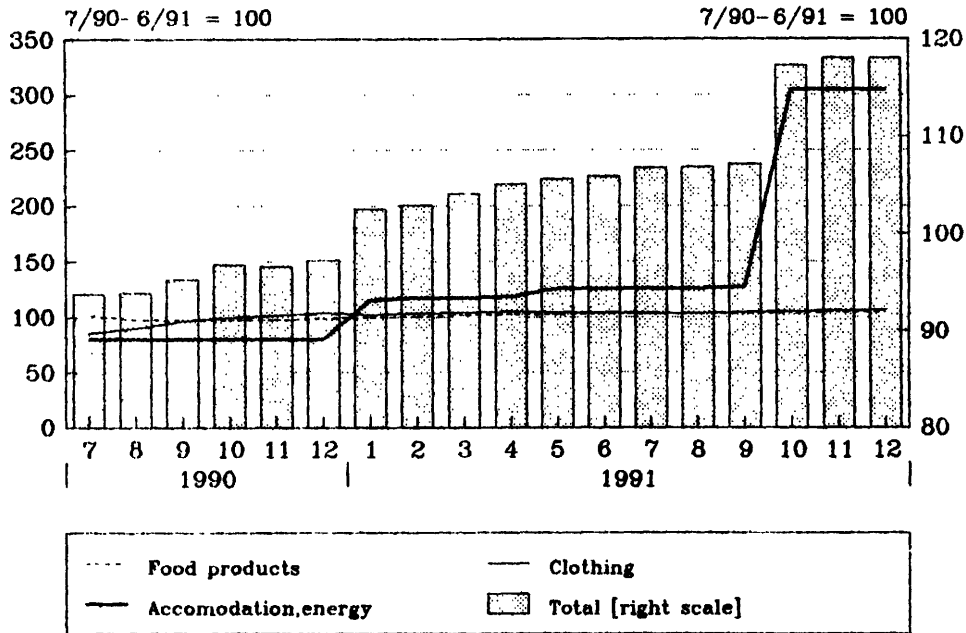
Following monetary union, prices for tradables adjusted almost immediately (after some over- and under-shooting) to West German levels; this reflected the complete integration of the West German and East German goods markets. While the prices of previously subsidized goods doubled or even trebled, the prices of goods that had previously

¹⁰ Furthermore, about 1.9 million formerly employed people are no longer shown in East German labour-market statistics, having taken early retirement, re-entered the education system, emigrated or become cross-border commuters.

attracted high taxation collapsed by up to 80%; the price index for industrial products fell by about 30%.

Prices of non-tradables, no longer subject to administrative regulation, have been moving in line with cost developments since unification. Other administered prices (in particular rents and transport) were only partially deregulated but prices for telecommunication services, energy and public transport services have almost doubled during the first twelve months. After monetary union housing rents, still frozen at the level of the mid-1930s, were subject to a first moderate increase in October 1991 and maintenance charges for accommodation have now risen to a more realistic level. The latter led to an enormous jump in the overall consumer price index, as these charges had previously been borne by the Government and have emerged as significantly higher than those which characterize other market-oriented economies. Nevertheless, the rate of return on the existing housing stock remains below that required to stimulate investment so that demand far exceeds the supply of appropriate accommodation.

Graph 4
Inflation performance



Source: Statistisches Bundesamt

The movement in the overall cost-of-living index in East Germany indicates an initial, aggregate fall before monetary union came into

effect; this trend reflected suppliers' attempts to run down stocks of East German products and the net downward effect on prices of changes in the system of taxes and subsidies. Thereafter, monetary union and the implied price adjustments led to some further decline in the price level. All in all, the overall fall in the consumer price index may imply some increase in purchasing power soon after monetary union began. However, subsequent cost (wage) developments in services and the adjustment of administered prices led to a continuous and quite steep rise in the overall index, which in February 1992 was about 16% above its level of a year earlier. This steep rise is mainly a reflection of the still incomplete process of transition from administered prices to market prices.¹¹

German economic, monetary and social union as well as political union was triggered and driven by the integration of the two labour markets, implying a likely catching-up of East German wages relative to West German levels.¹² The outcome of collective wage agreements in East Germany differs from sector to sector, with the differentiation in the growth of salaries broadly in line with the overall economic situation and prospects in each individual sector. Thus, branches with favourable prospects (such as banking and insurance, services, and construction) agreed wage levels equivalent to more than 60% of the respective West German level in early 1991. Wage levels in industry generally remain below this benchmark. In the public sector, where productivity-related wage formation is difficult to apply, wage adjustment has proceeded slowly relative to other sectors. It should also be noted that statutory wage levels equivalent to 60% of the West German level may be equivalent to less than 50% of the effective West German wage. Finally, the coverage of statutory wage agreements in East Germany is less comprehensive than in West Germany; only employers who belong to an employers' association are bound by these agreements. Consequently, wage levels in East German industry are probably not more than 50% of the current West German level. Nevertheless, they are certain to rise further in the near future and are not justified by relative productivity. Output

¹¹ There is, in any case, an index-related problem when it comes to assessing the overall rate of inflation as the published index is still based on a pre-unification basket of goods and services but major shifts in relative prices and changes in consumer preferences have resulted in a different pattern of expenditure.

¹² See also Burda/Funke (1991) and Sinn/Sinn (1991).

per employee in East German Industry is estimated to be 30% of the level in West German Industry.¹³

3.4 *The adjustment of the saving–investment balance and the current account*

The dramatic shift in East German demand, the collapse of trade with Eastern Europe early in 1991 and the outdated East German capital stock have led to a considerable deterioration in sectoral saving–investment balances and hence in the all–German external current account. With demand significantly in excess of domestic supply, East Germany has been running a huge deficit on its external trade and services balance since the start of the unification process. Despite subsidizing exports to Comecon partners, the trade deficit reached 36% of estimated East German GDP in the second half of 1990 and has continued to rise.

TABLE 2: THE EXTERNAL PERFORMANCE OF EAST GERMANY (values, bn DM)

	1989	1990	1991	1992	1993
Exports of goods to West Germany	5.7	7.3	13.1	20.6	25.8
Imports of goods from West Germany	7.5	48.1	144.0	163.8	174.1
Export of services to West Germany	3.0	8.5	9.1	12.7	15.6
Imports of services from West Germany	4.5	28.6	48.2	49.3	43.3
Trade balance with West Germany (goods and services)	-3.3	-60.9	-170.3	-179.8	-175.9
Export of factor income to West Germany :		2.9	13.2	19.9	21.6
Import of factor income from West Germany :		.2	.5	2.2	2.4
Factor income balance with West Germany :		2.8	12.7	17.7	19.1
Exports of goods & services to abroad	44.8	42.2	26.5	22.3	25.1
Imports of goods & services from abroad	40.9	24.0	19.1	22.1	25.3
Trade balance with abroad (goods and services)	3.9	18.2	7.4	.2	-.2
Public transfers from West Germany	5.1	43.0	90.0	100.0	100.0
Current account balance	5.7	3.1	-60.2	-61.9	-5.7

Source : Commission forecast (Nov. 1991)

¹³ The need for a consistent real wage–productivity balance is emphasized by Siebert (1990).

As huge public transfers from West Germany are allowing private households to maintain a level of consumption independent of changes in the domestic production system, there is effectively no current-account constraint.

The huge size and sudden emergence of the demand-supply gap in East Germany finds its main counterpart in a corresponding swing in the all-German public-sector balance. Despite a comprehensive package of revenue-enhancing measures early in 1991, the surplus on the public-sector balance in 1989 (0.2% of West German GDP) was transformed into a deficit of 3.6% of all-German GDP in 1991.

A tentative assessment of the sectoral financial balances in East Germany in the first six months after monetary union (i.e. in the second half of 1990) shows a balanced situation for private households; this is due to public transfers of about DM 40bn (38% of East German GDP) from West Germany. The public sector was also in balance, while the corporate sector ran a deficit of DM 23bn (22% of East German GDP). The imbalance in the corporate sector is the result not of a strong surge in investment but of a sharp slump in revenue due to a poor competitive position on the domestic market; thus, the financial accounts of East German enterprises are clearly in a most unhealthy state. In West Germany, the financial accounts of the corporate sector reflect a continuation of the very buoyant investment performance, with financial balances deteriorating but remaining in a generally healthy condition. Private households increased their saving mainly as a result of tax cuts in early 1990.

TABLE 3: SECTORAL INVESTMENT-SAVINGS BALANCES IN EAST GERMANY (In bn DM)

	11 90	1991	1992	1993
Private households	.3	5	10	15
Enterprise sector	-23.4	-50.2	-41.9	-37
Public sector	0	-15	-30	-35
Current account	-23.1	-60.2	-61.9	-57

Sources : Bundesbank, Commission forecast (Nov. 1991)

The most important factors determining the all-German current-account balance were the deterioration of the East German corporate balance sheet

and the surge in public-sector borrowing. Early in 1991, the latter increased further as a result of significant unilateral transfers to the United States (in connection with the Gulf war) and to the Soviet Union (in connection with the withdrawal of Soviet troops from East Germany). Consequently, the current-account balance showed a significant deficit of about DM 34bn in 1991, compared to a surplus of DM 77bn in the same period a year earlier.

4. *The need to establish a favourable economic-policy framework*

The goal of economic policy is to transform the East German economy into a competitive and dynamic market economy, preferably relying on labour-intensive production methods but without a slump in purchasing power. All of this requires large-scale adjustment. The results up to now, however, have been mass unemployment, a sharp fall in GDP and very high public-sector deficits. These disappointing results were unavoidable given the conditions prevailing in East Germany. Firstly, emigration remains an attractive option for much of the East German labour force until such time as large-scale capital flows into East Germany materialize. Secondly, the East German economy, isolated for decades from developments on world markets and with outdated capital stock and production methods, must now be rapidly transformed into a competitive market economy. Thirdly, after more than forty years of central planning, East German society must now adjust to a system of decision-making at a decentralized or micro level. Finally, the population is not willing to accept a collapse in purchasing power during the adjustment period. Models of systems to tackle undesirable migration flows and to foster large-scale capital inflows exist (with some success in West Berlin but less so in the Mezzogiorno) but there is no prior experience on which to base a transformation from central planning to market-oriented economic management.¹⁴

4.1 *Managing mass unemployment*

Although the main purpose of labour market policy is to foster the creation of new and self-sustaining employment, there is little doubt

¹⁴ For policy choices as a response to this challenge see also Morgan Guaranty (1991) and Matthes (1991).

that the East German labour supply will far exceed demand over the next few years. Two different labour markets reflecting a dual economy will exist side-by-side in East Germany for some time to come. On the one hand, there will be fast-growing sectors, e.g. services and those parts of manufacturing industry with a modern and productive capital stock financed by way of post-unification investment. This part of the economy will be able to pay high wages, as productivity could even surpass average West German levels. On the other hand, there will be declining sectors, e.g. agriculture, mining and parts of the manufacturing sector still using pre-unification capital stock. The survival of these sectors and branches is already threatened at current wage levels. As the economy will be split into two extremely divergent sub-economies and mass unemployment will be unavoidable, a dual approach to labour-market management is necessary.

The first element of this approach should address the short-term management of mass unemployment. In academic circles, wage subsidies have been proposed to make it easier to resolve the daunting problems on the labour market.¹⁵ Indeed, a choice exists in principle between subsidizing labour costs, capital costs or both. All such the measures will probably be aimed at fostering investment. It has, however, to be borne in mind that businesses should remain profitable, competitively sized and numerous enough to meet the employment goal.¹⁶ Subsidies should not remain permanently in place but should trigger investment by remedying short-term disadvantages. Moreover, financial resources are limited or, to put it another way, the likely rapid catch-up in wages will make wage subsidies quite expensive.¹⁷ Only if investors assume that subsidies will continue for a long time will investment in labour-intensive production take place. This, however, would involve the danger that labour-intensive production might not survive without subsidies. Moreover, if wage subsidies are provided only to existing East German enterprises, they might even discourage investment in new

¹⁵ See, for example, Akerlof et al and Begg/Portes (1991).

¹⁶ See Morgan Guaranty (1991).

¹⁷ The suggested (by Akerlof) trade-off between the wage level and the amount of subsidies hardly seems to be operational given the institutional structure of the overall German labour market. Quite negative on this point are also Sachverständigenrat (1991) or DIW (36/1991).

structures. Indeed, the implications for the relative competitiveness of subsidized and non-subsidized branches and enterprises will hinder new investment in East Germany; this, in turn, will result in a slowing-down in the adjustment process by supporting old non-competitive structures at the expense of new and more competitive structures.

As a short-term response to unemployment, consideration might be given to the creation, on a temporary basis, of a "parallel" labour market and economy consisting of public job-creation programmes, publicly financed job-procurement companies (Beschäftigungsgesellschaften), etc. The goal should be to absorb as much of the unemployed labour force as possible in this temporary parallel economy. However, production in this part of the economy should interfere as little as possible with production in the private sector and should focus mainly on the provision of public goods or goods with positive externalities such as environmental recovery, social services, etc. However, salaries in this "parallel" labour market would need to be set at such a level that they provided a positive incentive to seek employment on the competitive labour market. Furthermore, public subsidies to employment in the parallel labour market should be phased out within a short time. Negative repercussions on the real economy cannot be avoided, given the size of the labour force likely to be employed in this "parallel" market. However, negative effects would probably be less damaging than those related to other measures designed to manage mass unemployment. In general, the shift of official labour-market policy in the direction of job-creation programmes and job-procurement companies, which took place in mid-1991, is to be welcomed. Nevertheless, such schemes need to be stepped up since alternative schemes to delay or avoid employment adjustment in the real economy e.g. through special short-time working schemes or wage subsidies for (parts of) the private sector, are increasingly acting as a disincentive as regards the adjustment of existing enterprises, privatization and private capital inflows.

Complementary to the "parallel" labour market but of a more medium-term character would be large-scale retraining of the labour force as the nature of labour demand in East Germany changes.¹⁸ At present, the most promising areas for retraining are construction and

¹⁸ See also Fels/Schnabel (1991).

environment-related activities as well as the services sector. Retraining facilities and programmes will also need to be provided by public-sector institutions, since the scale of required retraining activities is enormous and cannot be managed by the private sector alone. Furthermore, the special nature of the labour force to be retrained demands a more flexible approach to retraining.

4.2 Attracting private risk capital and privatization

Large-scale private and public investment will be needed to transform the East German economy. However, the performance of both public and private investment to date has been poor. Public investment remains hampered by the lack of administrative absorptive capability. In future, both financial and real resources might become binding constraints too. With regard to private investment, there is no obvious reason to assume that investors will be more hesitant to invest in East Germany than elsewhere given the same expected rates of return. Consequently, the cautious approach of private investors, despite the opening-up of a completely new market, must imply the existence of less visible disadvantages which have reduced the expected rate of return and have thus diminished the attractiveness of East Germany as an investment location.

Indeed, until mid-1991, political, social and legal uncertainties, e.g. concerning property rights, constituted a major obstacle to new investment. Until then, the public authorities had failed to formulate a coherent framework of laws, rules and property rights. Such a framework is a fundamental condition for a market economy and for a positive investment climate. Unfortunately, the authorities initially gave the impression of hoping for a quasi-automatic repetition of the German "Wirtschaftswunder" of the early 1950s. As this failed to materialize, the Government introduced ad hoc investment incentives and subsidies between mid-1990 and early 1991; only then did attention focus on creating the necessary legal and administrative preconditions for private investment.

Box 2 : Major investment-supporting measures in East Germany (1990-1991)

MEASURES	DURATION
Reduce acquisition cost	
Investment grant for equipment (until 31 December 1991: 12%, thereafter 8%)	1 July 1990 to 31 December 1994
Investment grant (up to 23%) from the joint programme "Improvement of regional industry structure"; financed by : - the Federal Government and the Länder - the European Communities	1 July 1990 to 30 June 1995 1 January 1991 to 31 December 1993
Investment grant (up to 90% for business-related municipal infrastructure) financed by - the Federal Government and the Länder - the European Communities	1 July 1990 to 30 June 1995 1 January 1991 to 31 December 1993
Special taxation allowances	
Two-year exemption from personal and corporate income tax up to DM 10 000 for enterprises established before 1 January 1991	1 January 1990 to 31 December 1990
Creation of appropriations for tangible assets transferred to companies in the former GDR and for initial losses of the affiliates	1 January 1990 to 31 December 1991
Additional (50%) depreciation for equipment investment	1 January 1991 to 31 December 1994
Exemption from property tax and trading-capital tax and, for small and medium-sized enterprises, reduced trade-earnings tax	Until December 1992
Provision of concessional finance and guarantees	
Several programmes providing low-interest credits, liquidity credits and guarantees for liquidity loans	

Source: Compare Bundesministerium für Wirtschaft (1991)

Since mid-1991, however, the legal framework for investment has improved and the package of subsidies is expected to boost investment significantly since investment costs in East Germany have now been reduced by up to 75%. Nevertheless, some important obstacles to rapid investment growth still exist, namely shortcomings in public administration and in public infrastructure. While the former may improve in the short term, the latter will continue to be felt for quite

some time as a result of budgetary constraints and limitations on capacity in both the public and private sectors. Nevertheless, commitments to large-scale public infrastructure investment, albeit delayed by planning constraints at administrative level, could boost expectations and strengthen private investment.

Opportunities for private investment exist: (I) in the modernization of existing installations still mainly owned by the publicly owned Treuhandanstalt, (II) in the modernization and expansion of the housing stock, and (III) in the construction of completely new structures. At present, the outlook for attracting risk capital to create completely new structures and capacities is most promising, since the comparative disadvantages of East Germany as a location for production are offset by generous incentive schemes. If public infrastructure investment plans are realized, these disadvantages may have disappeared by the time production in new locations comes on stream in the mid-1990s.

The creation of a competitive and modern services sector does not require generous investment subsidies. There is already evidence of large-scale investment in this sector, including banking, insurance and distribution, which began immediately after monetary union, i.e. before the various investment subsidies were announced. Nevertheless, investment projects in the services sector are at present as heavily subsidized as corresponding projects in manufacturing industry.

The outlook for residential investment is also quite promising despite the present low level of rents. As investment costs can now be reflected in rents and since a gradual liberalization of rent regulations began in October 1991, expected returns in this field are progressively improving. However, risk capital will come mainly from public and foreign sources as potential East German investors suffer from liquidity constraints.

The outlook for attracting private risk capital to modernize outdated capital stock is, however, quite gloomy.¹⁹ This mainly affects the manufacturing sector, where enterprises still to be privatized face special problems which make them unattractive to potential investors.

¹⁹ The importance of privatization is emphasized too by Fels/Schnabel, (1991).

Firstly, existing corporate debt, which accumulated during the years of centrally planned management, must in principle be serviced by the new owners. Secondly, many business locations are polluted and the new owners are expected to take responsibility for cleaning-up measures. Finally, the Treuhandanstalt has tended to interfere with the investment plans of new investors, so as to encourage the retention of as much of the labour force as possible, thereby hindering rapid and necessary increases in labour productivity.

Transforming existing corporate debt and ecological risks into public debt and public risks could substantially accelerate the privatization process.²⁰ The effect on the balance sheet of the Treuhandanstalt could even be positive and risk capital could be attracted more easily. Undoubtedly, the present privatisation strategy of the Treuhandanstalt handicaps small and medium-sized investors and supports the creation of an oligopolistic economic structure in East Germany. Furthermore, it has emerged that new owners do not always wish to maintain production or to modernize plant and machinery but sometimes acquire production plants simply for speculative reasons (in expectation of soaring land prices) or in order to neutralize potential competition.

4.3 Balancing public finances and stabilizing purchasing power

Up to now, German unification has been quite costly. The public-sector balance has deteriorated very significantly and the increase in the real disposable income of private households in West Germany as a result of the income-tax cuts of early 1990 have already been offset by higher social security contributions and tax increases. Nevertheless, public transfers to East Germany have so far been used mainly to underpin consumption rather than to promote investment.

In estimating the resources needed to finance a catching-up process in East Germany and to maintain employment, one might look at the experience of West Berlin before unification. The situation in West Berlin was similar to that of East Germany as regards the willingness of the labour force to emigrate and the cautious approach of private investors. Under the Berlin Assistance Law of 1952, a package of public incentives to

²⁰ See also Pohl (1991).

counter labour-force migration and to promote investment was introduced. In the late 1980s, more than DM 20bn a year was needed to finance about 1 million jobs and to facilitate the smooth operation of an economy of 2 million people. However, these financial burdens, in terms of extra outlays and smaller revenue figures at both (Federal and Land) levels of government, were concerned with maintaining activity in the small West Berlin economy. In the case of East Germany, an economy with a labour force of about 8 million and a total population of 16 million, substantially greater resources may be needed to finance the modernization of the public and private capital stock. Consequently, a "back-of-the-envelope" calculation suggests that DM 160bn a year may be needed during the 1990s to avoid the emergence of a peripheral and uncompetitive East German economy. This financial requirement is equivalent to the change in the public-sector balance brought about by the unification process so far.

The understandable decision by the authorities not to allow purchasing power to drop dramatically in East Germany has absorbed budget resources to the tune of about 5% of GDP per year. Although it has been possible to borrow this money on capital markets, a more solid financing base is needed as annual transfers of this order of magnitude will be required for five to ten years, although they should fall over the period. This will require a correspondingly large domestic redistribution in favour of transfer income. Such a redistribution should not be at the expense of private investment and so the disposable income of private households must be targeted, e.g. through temporarily higher income-tax rates and social security contributions or expenditure cuts. It is desirable, therefore, that the social partners should not seek compensating wage increases but should take these requirements into account when negotiating new wage settlements in the early 1990s. In view of the need for ongoing wage moderation and continued social consensus in Germany, both preconditions for a positive investment climate, it may be difficult to reduce corporate taxation over and above those measures already adopted in the course of the unification process.

4.4 Regulations, subsidies and supply-side policy

At times of buoyant investment activity, regional investment subsidies are an appropriate tool to attract risk capital by changing the regional

preferences of potential investors. At times of weak investment activity, however, it may be more promising to concentrate initially on creating a positive and favourable investment climate. The investment climate in Germany is deteriorating at present. High interest rates, unsustainable trends in public finances, tax increases and costly wage agreements, together with quite sluggish external demand prospects, are adversely affecting expected rates of return on new investment. Consequently, if regional subsidies are to have the desired effect on investment, a consistent and significant package of supply-side measures must be introduced to prepare the ground for a longer-term dynamic investment performance in Germany. This package should include deregulation measures (the report of the Deregulation Commission in early 1990 contains several relevant proposals), a significant reduction of sectoral subsidies and expenditure control in the public sector to bring public finances back onto a healthy path. In addition, wage moderation in the public sector could have a positive demonstration effect on wage agreements in the private sector. It must also be borne in mind that any investment subsidy in West Germany acts as a disincentive to investment in East Germany.

More attention should also be paid to the potentially adverse repercussions of privatization and subsidization in East Germany on the overall level of competition and profitability in Germany.²¹ The recent stance of economic policy in East Germany favours large-scale and capital-intensive investment, which is coming mainly from companies that often already hold a dominant position on the West German market. This is true for all sectors, e.g. energy, motor vehicles, banking, insurance and retailing. At the end of the adjustment process in East Germany, a completely refashioned economic structure with more oligopolistic markets and less competition and flexibility may have emerged in Germany as a whole, in place of an economic structure dominated by competitive and flexible small and medium-sized enterprises.

Finally, the integration of the two parts of Germany requires enormous and long-lasting adjustments in behaviour in West as well as East Germany. The scale of the challenge this poses to German society demands

²¹ See also Fels/Schnabel (1991).

a large measure of economic and social consensus; otherwise, the necessary redistribution in favour of East Germany may result in severe and counterproductive disputes. The Government, opposition, employers' associations, trade unions and all other important groups should seek to develop a social pact deriving from an agreed strategy for a successful catching-up process in East Germany without endangering social stability in Germany as a whole.²²

²² See also : Commission (1990), Schmidt (1992).
More detailed on such a strategy : Sinn/Sinn (1991).

11. CHANGED PATTERN OF THE GERMAN ECONOMY

1. Introduction

German unification has affected the macroeconomic performance of the German economy, as regards both economic target variables and economic policies. The change in economic performance will undoubtedly influence the European economic integration process. Part III will focus on these issues. This part is devoted to a discussion of the factors which were responsible for these changes and of the economic outlook. In contrast to Part I, we shall focus here on the performance of the overall German economy since it will become increasingly inappropriate to distinguish between two separate economies.²³ Indeed, the economic integration of the two parts of Germany has moved extremely fast and, in several respects, integration is proceeding further than can ever be expected in Europe. It is having a bearing not only on institutional aspects, e.g. the tax system, but also on economic interrelationships, such as labour-market behaviour.

Section 2 identifies major disequilibria between regional demand and supply as key sources of the economic imbalance prevailing in Germany in the aftermath of unification. Ultimately, all the economic implications of unification are traceable to this source: economic boom in West Germany, danger of accelerating inflation, and marked swing in the current-account balance. The change of the overall policy mix in Germany (Section 3) has been considerably influenced by unification. Initially, fiscal policy was eased significantly as a means of satisfying the demand of those living in East Germany, a demand that had been suppressed over decades as a result of supply shortages. In order to dampen inflationary dangers, monetary policy was tightened solely in response to domestic considerations. Consequently, there might be a conflict between domestic needs and external requirements in the conduct of monetary policy. And so, in order to reduce economic strains in Germany, the issue of redistribution must be discussed (Section 4).

²³ See also Kröger (1991).

2 *Demand and supply dynamics after unification*

We saw in Part I that unification has rendered a significant part of the East German capital stock economically obsolete. This concerns not only industry, where it is, however, most obvious, but also construction, agriculture and even services and the public sector. Not only the capital stock has become obsolete. The quality of labour supply is also falling to match demand. Thus the economic potential of the former East Germany has been severely reduced.

2.1 *The regional perspective*

Before monetary union, the desolate structure of the East German economy – also relative to East German demand – had been hidden with the help of rigid external protection and the non-convertibility of the only legal tender in the hands of East German residents. However, the poor economic potential of the former East Germany has been brought to light by developments since unification: production in industry has collapsed, but without significantly improving productivity.

On the other hand, domestic demand, suppressed by the above-mentioned measures for decades, was bolstered via a very generous conversion rate for financial assets and flows, and via generous transfers from the West German government, although these were financed by borrowing on capital markets. In East Germany, a revival of potential output based on existing production factors is severely constrained. First, demand for goods which can be produced with the existing capital stock is fairly low and very price-inelastic. Second, economically viable production will require very large increases in labour productivity. This means that more capital with insufficient marginal capital and labour productivity will have to be scrapped. Indeed, in order to survive in a market-oriented economic environment, productivity has to approach the West German level. Given the existing deficiencies, only a small proportion of the labour force will be employed in the medium term on the basis of the existing capital stock.²⁴

²⁴ The IAW (1991) has estimated that only 1/4 of the (severely reduced) labour force will be employed, given the existing capital stock after a successful catching-up process.

All in all, the economically viable supply potential of East Germany will remain low for the next 2-3 years, even if large-scale private investment materializes. On the one hand, the adjustment process has not yet been completed. On the other, investment today will boost supply only over the medium term. This concerns not only investment in physical capital, but also investment in human capital. Therefore, in a positive catching-up scenario, aggregate supply will remain low relative to demand in East Germany until the mid-1990s.

From an economic and supply-demand point of view, the supply-demand gap in East Germany emerged just in time to prevent a major slowdown of economic momentum in West Germany. At a time when demand in major partner countries became sluggish and West German export buoyancy – evident during the late 1980s as investment expanded sharply – faltered, West German suppliers were happy to serve a completely new market. Indeed, West German producers were able to channel a significant part of their production to the East German market straightaway.

The persistent supply-demand gap in East Germany will probably characterize Germany's economic performance for quite some time and it has led to a considerable swing in the German current-account balance. The all German trade surplus, which stood at almost 6 % of unified German GDP in 1989, was reduced to a marginal surplus of 10 bn (0,75% of GDP) in 1991. Imports soared by two digit growth rates in both 1990 and 1991, reflecting the strong demand of East German residents.²⁵ Not only higher import demand but also stagnating exports led to the deterioration in the current-account balance. Indeed, as capacity utilization rates moved above normal levels, supply bottlenecks in West Germany became more serious and foreign orders were cut back.

All in all, it can be said that the West German current-account surplus provided the real resources to close the supply-demand gap in East Germany. Taking the trade balance of West Germany alone, there was still a surplus equivalent to almost 7 % of GDP, corresponding to the country's net exports to East Germany.

²⁵ For more details, see Section 2 in Part III.

2.2 *The sectoral perspective*

It is evident that the catching-up process in the East German economy implies huge amounts of investment. It has also to be recognized that modernization of existing enterprises requires large amounts of investment too. Following a scenario in which around 30%²⁶ of the net capital stock survives and in which the capital-output ratio after the catching-up process has been completed equals that in West Germany (2.7), capital requirements would amount to around DM 1.800 billion, or 2/3 of present all-German GDP. Assuming that 50% of this investment was provided from external sources, the current-account deficit would widen by a further 3 1/2% of GDP if the catching-up process is assumed to last ten years. Higher consumer spending would contribute to a larger deficit until the supply effect of new investment raised domestic output.

While the considerable decline in viable supply had been unavoidable given the three "big bangs" associated with integrating the East German economy into the overall German and Community economy, the purchasing power of East German residents has been underpinned by several factors. First, the favourable conversion rate for private-sector savings was a once-and-for-all "wealth gift" to East German residents; second, the rapid wage-adjustment process implied that the consumption wage exceeded the product wage consistent with an appropriate level of enterprise profitability. Consequently, enterprises rely on liquidity credits which are guaranteed by the Treuhandanstalt and will probably add to public debt later on. This indirect subsidization of wages has been accompanied by very generous short-term working arrangements and by artificial support for demand via ex post credit guarantees in particular vis-à-vis the USSR. Finally, several transfers were broadly indexed to wage developments or even adjusted ahead of wage increases.

The disappearance of the German current-account surplus corresponds to a similar decline in net national saving. Seen from this angle, the saving potential remains low in East Germany.

²⁶ See Pohl (1990). Similar amounts of capital needed are described in Burda (1990) or Neumann (1991). The IMF has estimated the need for new capital at DM 2 000 bn. See McDonald/Thumann (1990).

The personal saving ratio has been very low as dissaving took place following the generous conversion of financial assets and in order to satisfy the considerable pent-up demand for consumer durables. Although personal saving will tend to return to normal levels, not least because of the uncertainties prevailing on the labour market, it will remain below the saving ratio in West Germany. The proportionately larger share of transfer incomes is one explanatory factor. Given favourable catching-up prospects, consumer demand might rise ahead of disposable income according to the permanent-income theory.

Corporate saving will remain low in East Germany as profits continue to be depressed, irrespective of more favourable profit expectations in the medium term, which are crucial if investment is to be encouraged. Investment by East German enterprises will, therefore, lead more or less directly to a greater financial deficit in this sector. Again, in a positive catching-up scenario, the financial deficit of the corporate sector would be larger and the current-account effect negative.

Fiscal policy consolidation will prove to be a major challenge. Leaving aside significant risks,²⁷ there has been a considerable loosening of fiscal policy. Although official estimates of the medium-term prospects for public finances are quite optimistic, they depend on very favourable assumptions. A reduction in the budget deficit even for the Federal Government alone – the official forecast is for a reduction from 5% of GDP in 1991 to 2 1/2% of GDP in 1995²⁸ – would require a larger reduction in the primary deficit. Taking into account that the debt-service requirement will grow by about 2% of GDP over the period 1991–95, the primary deficit of 0,1% of GDP in 1991 would have to be transformed into a surplus equivalent to 2% of GDP. Since, for the time being, transfers to East Germany account for most of the public-sector deficit while investment incentives will lead to revenue shortfalls at a later date, a shift in expenditure away from transfers will also have to be achieved. Finally, large-scale infrastructure investment will require additional public funds.

²⁷ For more details, see Section 3.2.

²⁸ However, the absolute reduction of the deficit is quite small since, on the assumption of buoyant nominal GDP growth, a reduction from 5% to 2 1/2% of GDP translates into an absolute reduction from DM 120bn in 1991 to DM 90bn in 1995.

Fiscal consolidation will prove to be difficult, regardless of the catching-up scenario. A positive scenario would require large-scale public infrastructure investment as the catalyst for private investment and would lead to revenue shortfalls because of incentives provided for private investment. However, since employment would be much higher in this scenario than in the opposite case, transfer payments (social security payments) would be much lower. In an unfavourable scenario, the risks would lie in the opposite direction: While investment-related net expenditure would be lower, transfer payments would be higher. Therefore, the public-sector deficit would remain large in the medium term.

All in all, the expected continuation of a current-account deficit seems to be consistent with the analysis of sectoral saving/investment prospects. A larger deficit can be expected with a favourable catching-up scenario.

3. *Impact on economic policies*

3.1 *Monetary policy*

The short-term implications for monetary policy arising from the conversion of Ostmarks into convertible D-Marks were less dramatic than initially feared by both the Bundesbank and financial markets. The latter were very sceptical about the success of the economic integration approach. Immediately after the announcement of monetary union, long-term interest rates jumped by 150 basis points without any change in economic fundamentals. Therefore, to a very large extent, the interest rate increase mirrored a higher risk premium for the D-Mark. Interest rates in EMS partner countries increased to a much lesser extent. In addition, the Bundesbank warned against an unduly generous conversion of financial stocks, in particular savings deposits of private households, wages and transfer incomes.

The conversion operation was conducted very efficiently by the Bundesbank and the inflationary implications were initially much less significant than had been feared. The inflationary threat stemming from the approach chosen for integration was due in particular to the wide discrepancy between aggregate demand and supply in Germany. Such a demand

surplus normally requires a real appreciation of the domestic currency, the D-Mark²⁹. A real appreciation can be brought about either by a nominal appreciation or by a higher rate of inflation than in other countries. A realignment within the EMS would have been difficult to achieve as it would have damaged the credibility of the stability-oriented monetary policy of the EMS countries. Moreover, monetary tightening in the EMS and an implied appreciation of European currencies vis-à-vis the dollar would have reduced growth prospects in many countries where the cyclical situation was already quite vulnerable.

However, despite the large supply-demand gap, higher inflation did not immediately materialize in the aftermath of unification. Several factors facilitated the necessary transfer of goods and services to East Germany. First, the excess demand was mainly for consumer durables, which have a high price elasticity and the import content of which is very large anyway. Second, imports to Germany were facilitated as the demand profiles were asymmetric, i.e. excess demand in (East) Germany and excess supply in some partner countries. Third, because of sluggish growth in world trade, German exporters looked to the East German market. Fourth, additional demand was met by higher production in West Germany, with normal capacity utilization rates possibly being surpassed. This also enabled enterprises to achieve short-term productivity gains. Indeed, profit margins were increasing. All in all, developments have shown that the European economies have become more integrated, reducing the need for real exchange-rate movements to shift resources in the event of regional imbalances in supply and demand.

Although the short-term implications have not been as great as initially expected, monetary policy has to face several challenges. These are associated first with the technical aspects of conducting monetary policy within its new framework, second with economic prospects in Germany and the right policy mix, and third with the monetary implications of a distributional struggle between the various economic agents in Germany.

²⁹ See on this e.g. Wyplosz (1991), who also draws attention to the divergence between short-term and long-term considerations. See also Adams/Alexander/Gaynon (1992).

The more technical aspects concern the diminished validity of monetary targets as intermediate indicators of monetary policy. The conversion of Ostmarks into D-Marks has created a monetary overhang. Compared to the 7% share of the East German economy in overall German GDP, the money stock M3 increased by around 20%. However, much of this disproportionately large increase reflected a strong liquidity preference on the part of East German residents. It can thus be expected that non-monetary financial aggregates will grow at a disproportionately strong rate, reducing the broad money stock. Therefore, the monetary overhang should not necessarily feed through into expenditure. Nevertheless, interpretation of monetary aggregates based on changes in behaviour will prove more difficult than in the past. The Bundesbank will have to aim at lower growth in monetary aggregates in view of the likely increase in the velocity of circulation of (broad) money in East Germany.

Economically more important is the issue of responding to different economic scenarios in East Germany, and a positive catching-up scenario in East Germany could be based either on large public-sector investment and transfers or on private-sector investment in response to positive expectations there. In both cases, the supply-demand gap would widen, necessitating a larger transfer of real resources to East Germany, and this in turn would produce a larger current-account deficit.

If investment consisted primarily of public investment in infrastructure, with private investment remaining subdued at least during the short-to-medium term, the public-sector deficit would be large. As imports of such goods would be comparatively low, the current-account deficit might remain modest. However, inflationary dangers would arise from lopsided sectoral developments, i.e. strong price and wage pressures in the construction sector, perhaps accompanied by similar developments in other sectors as a result of an intersectoral wage-demonstration effect, and mounting tax pressures because of the need to consolidate public finances.

In the case of positive private-sector expectations and high investment, pressure on the public-sector balance would be much reduced, but the current-account deficit might turn out to be larger. Inflationary pressures would be fuelled by a persistently large supply-demand gap, not only for investment goods but also for consumer goods because of more

favourable income expectations and multiplier effects. In both scenarios, a tight monetary policy stance would remain necessary in Germany for domestic reasons. Moreover, in the second scenario, monetary conditions would prove to be tighter because external capital inflows would tend to push up the D-Mark while, in the first scenario, the trend of the D-Mark would depend on the degree of monetary tightening.

The third scenario, characterized by no catching-up process in East Germany, would entail large transfer payments to the East German population. As in the case of the Mezzogiorno, the public-sector deficit would turn out to be quite large and the structure of expenditure would be much worse than in the first scenario. However, as investment would be much lower than in the two optional scenarios, the implied current-account deficit would be modest. Moreover, inflationary pressures would be mitigated by growing labour-market integration, i.e. high unemployment in the East will have implications for wage settlements in Germany as a whole. Such a scenario will render monetary tightening much

Box 3 : Monetary implications of different developments in East Germany
- a stylized view

Possible scenarios

	I catching-up based on public investm.	II catching-up due to private sector investment	III no catching -up
--	---	--	------------------------

Economic Implications

A. Fiscal deficit	large	low	modest
B. Current-account deficit	modest	large	modest
C. Inflationary pressures	construction sector, higher taxes	supply-demand gap, labour market pressures	reduced by labour market development but danger of weak D-Mark
D. Exchange-rate response	depending upon degree of monetary tightness	revaluation	tendency for weak D-Mark
E. Monetary policy	tight	tight	no tightening

less necessary. However, the D-Mark would be weaker than in the other two scenarios.

All in all, given the likely developments in Germany, tight monetary conditions will have to prevail over the coming years either because of the shift in fiscal policy towards a more expansionary stance or because of a favourable catching-up process triggered by private-sector expenditure. Only in the worst-case scenario of no catching-up might monetary conditions be less tight.

3.2 Fiscal policy

In 1990 German public finance departed from the path of fiscal consolidation on which it had embarked in 1982. It is German unification in particular that led to a major relaxation of fiscal policy although, irrespective of that historic event, a loosening of fiscal policy had been planned for early 1990 with the introduction of the third stage of the 1986-88-90 tax reform in West Germany, producing revenue shortfalls equivalent to some 1% of West Germany's GDP. The further shift in fiscal policy was prompted by several factors. Firstly, the asymmetric exchange rate for Ostmark assets and liabilities led directly to additional public debt (equalization claims) of about DM 30bn and to an initial supply-demand gap. Secondly, the very generous conversion rate for the Ostmark led to high expenditure as East German transfer payments and salaries in the public sector were not covered by corresponding revenue. Thirdly, several investment subsidies and tax exemptions designed to foster investment in East Germany widened the gap between public revenue and expenditure. Fourthly, the increase in public-sector salaries in West Germany was unexpectedly large in late 1990/early 1991 - perhaps influenced by the general election in December 1990. This generous salary increase added significantly to inflationary (wage-cost) pressure in West Germany.

Finally, a kind of "growth illusion" in West Germany also led to an expenditure spree in West German public budgets. Soaring growth and revenues were deemed to be sustainable and were seen as the result of successful supply-side policy. It was not recognized - at least not immediately - that dynamic growth in West Germany was only the other side

of the coin of the economic slump in East Germany. Consequently, the extra revenue in West Germany was no more than recycled transfer payments from East Germany financed by borrowing on capital markets.

All in all, fiscal policy in Germany switched from a healthy and sustainable consolidation path with beneficial supply-side effects to a pattern characterized by large imbalances in East Germany, by something of spending spree in West Germany, by an increase in marginal tax rates with detrimental supply-side effects and by a narrowing in the tax base. The swing in the public-sector balance has been as large as 5% of GDP. However, one has to distinguish carefully between the different levels of government.

Federal Government

In the aftermath of unification, the Federal Government budget in particular had been affected. The increase in the deficit from around DM 36bn in 1989 to DM 68bn in 1990 was due mainly to the acceptance of responsibility for the public-sector deficit of the GDR (about DM 20 bn) in the second half of 1990.³⁰ Moreover, after the opening-up of the internal border, transfer payments were made to East German residents. During 1991 the Federal Government budget deficit (DM 52 bn) was actually reduced in quantitative terms. In qualitative terms, however, the deficit was now attributable to measures in support of the catching-up process in East Germany (Economic Revival Programme) and, more importantly, to the financial support for transfer payments, in particular those aimed at safeguarding a high level of employment. Furthermore, higher expenditures were also financed by higher revenue, following several increases in direct and indirect taxes.

In future, several risks are associated with the prospects for the Federal Government budget. On the revenue side, lower-than-expected growth could make for a lower outturn than that anticipated in the medium-term plan. In addition, revenue will be influenced by the investment incentives available in the form of tax allowances. These will reduce the tax bill of enterprises significantly from 1992 onwards

³⁰ To a lesser extent, it was due to the above-mentioned income tax cuts in West Germany, which had been already decided upon before the changes in East Germany.

If private investment picks up. On the expenditure side, risks arise from the need to take over (part of) East Germany's debt, particularly as regards the Treuhandanstalt. Not only is the Treuhandanstalt running a growing deficit in respect of its current activities, but it has also granted large amounts of liquidity credits to enterprises which might not be paid back. Moreover, the former debt of enterprises has, to a large extent, been taken over by the Treuhandanstalt where the enterprises concerned have been privatized. This is the price that has to be paid for the generous conversion rate for Ostmark assets, which is harming existing enterprises and pushing them into bankruptcy. Assuming responsibility for obligations in the area of environmental damage adds to the financial risks. The budgetary prospects for the Treuhandanstalt are also gloomier as a result of the privatization process itself. As it will become increasingly difficult to generate revenue by selling enterprises, no expenditure-balancing items will appear in the balance sheet of the Treuhandanstalt. If, in the mid-1990s, the debt of the Treuhandanstalt becomes genuine public debt, the interest-rate burden of the Federal Government might be un eased by at least 0.5% of GDP assuming that 50% of the accumulated debt are taken over by the Federal Government.

Indirect subsidies for German enterprises might also affect the Federal Government budget. During 1991 large amounts of export-credit guarantees were granted by the publicly owned Hermes Credit Insurance Company. Since these credits, in particular those for the USSR, will very likely not be paid back, Hermes will probably make significant losses in the years ahead. Further risks which cannot be accurately quantified arise in connection with the restitution of what was previously private property, with attempts to balance the books of the social security system, with any reduction in the taxation of basic income, etc.

Länder

As regards the budget situation of the Länder, one has to distinguish between the West German Länder and the East German Länder. As regards the former, direct short-term financial risks stemming from German unification are limited as the German Unity Fund covers the major risks, which were (deliberately) taken over by the Federal Government. The West German Länder will contribute to the German Unity Fund to the tune of DM

57,5 bn until 1994. If one takes into account the interest charges in respect of the implied debt-servicing requirement, expenditure increases by around 1,5%. Indirect effects, e.g. in relation to corporation tax receipts, should not, however, be underestimated as direct investment in loss-making affiliates in East Germany will reduce the corporation tax payable by parent companies registered in West Germany. Furthermore, the situation will become more critical in the medium term when the East German Länder participate in the financial equalization mechanism (Finanzausgleich). Assuming that from 1995 onwards they participate fully in the system, the loss in revenue or higher payments into the mechanism will amount to almost 10 % of the expenditure of the West German Länder (see box).

The East German Länder will face a growing mismatch between revenue and expenditure. Their own financial resources will remain limited as tax revenue accruing from economic activities in East Germany will be low. In particular, corporation tax receipts will probably remain negligible during most of the 1990s. As regards other direct taxes, there will be a trade-off between the wage level and the level of unemployment. Although a rapid catching-up of wages might increase tax revenue per employed taxpayer, the number of taxpayers will be reduced as a result of job losses. Moreover, in the likely scenario of rapid wage equalization, government consumption would be directly affected since some 35% of Länder expenditure is accounted for by wages. Therefore, the only quantitatively important source of tax revenue for the East German Länder would be indirect taxes.

However, since the purchasing power of East German residents will remain significantly below that of their West German counterparts and since expenditure might be skewed towards lower-taxed goods, this source of revenue might not be as productive as in West Germany.³¹ Finally, high expenditure will also result from various other factors: major investment in infrastructure, high transfers to compensate for rapidly rising accommodation costs, etc.

³¹ In West Germany, VAT is shared on a regional basis, by reference to population, and not by reference to the real regional tax base. In 1991 the West German Länder agreed to allow the new Länder to participate in this arrangement even though the Unification Treaty ruled this out.

Box 4 : Incorporating the five new Länder in the West German revenue-sharing system

I. The working of the West German revenue-sharing system (Finanzausgleich)

The West German interregional redistribution system, not including social security (which by the way, is significantly more important in this respect), consists of three elements : (i) tax sharing, (ii) horizontal revenue sharing and (iii) vertical revenue sharing. In the end, every individual Land's fiscal capacity should reach 95 to 97% of the average fiscal capacity. The basis for (the acceptance of) this system are identical tax rules in the whole territory, i.e. there exists no room for regional differentiation in taxes and tax rates with the exception of the local trade tax.

(i) Tax sharing (wage and income tax, corporation tax and VAT)

Joint or shared taxes cover all of the most important revenue sources in Germany, yielding approximately three quarters of total tax revenues. These taxes are shared among the Federal, the Länder and the local level as follows : 42,5%, 42,5% and 15% for personal income tax, 50%, 50%, 0% for the corporate tax and 65%, 35%, 0% for VAT. In addition to the wage and personal income tax, the corporation tax and the VAT the local trade tax is also shared by all three levels of government - although it is not officially a joint tax.

The regional distribution of income taxes follows the regional pattern of tax yields (according to the residence principle with special rules for the apportionment of the corporation tax). The regional distribution of VAT is essentially on a per capita basis (which implies an implicit equalisation effect). However, in an advanced allocation of VAT revenues up to 25% of the Länder share of VAT (Ergänzungsanteil) can be used to increase the fiscal capacity of poorer Länder to 92% of the average indicator (Steuerkraftmeßzahl). In 1990, only 2,6% of the Länder share (i.e. DM 1,3 bn, representing 0,06% of West German GDP) was needed to reach this goal.

(ii) Horizontal revenue sharing (Finanzausgleich)

In a second-round redistribution process, revenue-weak Länder get additional revenues from other Länder if their individual fiscal-capacity indicator (Finanzkraftmeßzahl) is below 95% of a normative fiscal-need indicator (Ausgleichsmeßzahl). The fiscal-capacity indicator measures actual revenues from a list of taxes all Länder have in common. It is adjusted for special burdens of some Länder. The fiscal-need indicator calculates normative tax-revenues of an individual Land by taking into account also urban-density factors. Consequently, every individual Land's tax-revenues reach at least 95% of the average fiscal-capacity indicator. In 1990, horizontal revenues sharing amounted to DM 4 bn, 0,17% of West German GDP.

(iii) Vertical revenue sharing (Ergänzungszuweisung)

Through a vertical revenue sharing system, the Federal Government is allowed to redistribute up to 2% of its own VAT-revenues for unconditional asymmetrical vertical grants-in-aid (Ergänzungszuweisungen) to those Länder whose revenues are still considered to be insufficient to meet their public expenditure obligations. In 1990, vertical revenue sharing reached DM 3 bn, 0,12% of West German GDP.

Vertical and horizontal revenue sharing is not very important from a macroeconomic point of view and when compared to total revenues of the aggregated Länder level. However, it is essential for certain Länder (e.g. about 17% of all revenues of the Saarland).

(iv) Other vertical grants

In addition to (iii) the Federal Government is involved in several other asymmetrical vertical grant schemes, which are, however, conditional grants and often subject to additionality. So these systems could be compared with the structural funds of the EC. In 1990, these vertical grant schemes reached DM 11,5 bn, 0,48% of West German GDP.

West Berlin was not covered by the automatic revenue sharing systems. In the past, there existed a special vertical scheme between the Federal Government and West Berlin. In 1990, the net cost for the Federal Budget reached DM 15,5 bn or 0,65% of West German GDP, greater than the total of DM 8,3 bn, involved in vertical and horizontal revenue sharing in West Germany.

The five new Länder are excluded from the vertical and horizontal revenue sharing system described above, as the involved automatic transfers have not been politically feasible. Instead, several lump-sum funds were launched to arrive at the necessary transfer of financial resources. The whole system will be subject to a major revision before 1995, taking into account larger discrepancies in per-capita GDP between western and eastern Länder.

Box 4 (continuation)

II. Incorporating the five new Länder¹

Assumptions

The five new Länder are treated as one new Land. East Berlin is treated as a part of Berlin, i.e. the number of inhabitants is multiplied by 1,35 according to the definition of the fiscal-need indicator. As no reliable data exist as regards tax revenues per head following assumptions underly the simulation (in % of West German level) :

- Income tax, corporate tax, local trade tax : 20%,
- VAT : 50%,
- Länder taxes : 30%,
- Local taxes : 20%.

The simulation does not deal with issues related to the split of income tax, corporate tax and VAT according to populations etc. The population of East and West Berlin is set at 3,4 million, the population of the new Länder is assumed to be 14,9 million. The figures of 1990 have been taken for the West German Länder.

Results

The amount transfer among the Länder increases from DM 5,4 bn (0.2% of West German GDP) to DM 27,9 bn (1.2% of unified German GDP). DM 9,2 bn are transferred in the context of the advanced allocation of VAT revenues (see (i)), DM 18,7 bn are transferred in the process of horizontal revenue sharing (see (ii)). Not considering special guarantee clauses, almost the total amount (99,2%) is transferred to Berlin and the new Länder, only Bremen and the Saarland receive minimal amounts.

Transfer payments (-) and receipts (+) after incorporating the five new Länder(*)
- advanced allocation of VAT revenues and horizontal revenue sharing -

	in bn DM	DM/inhabitant	p. i. DM/inhabitant excl. East Germany and Berlin
Nordrhein-Westfalen	-8,5	-496	-42
Bayern	-4,6	-411	-3
Baden-Württemberg	-7,1	-742	-299
Niedersachsen	-0,3	-38	+380
Hessen	-4,2	-738	-294
Rheinland-Pfalz	-0,6	-156	+133
Schleswig-Holstein	-0,1	-57	+321
Saarland	+0,0	+71	+598
Hamburg	-2,3	-1432	-43
Bremen	+0,1	+201	+924
Berlin	+5,5	+1631	-
Neue Länder	+22,0	+1479	-
Gesamt	+/-27,9	+/-354	+/-86

(*) Not taking into account guaranty clauses of § 2 and § 10,3 Finanzausgleichsgesetz.
Source : Fuest/Lichtblau (1991)

Some qualifications have to be made now :

- (1) By limiting the share of VAT reserved for an advanced allocation to 25%, fiscal capacity of the new Länder can only be boosted from 26% to 56% of the average fiscal capacity of all Länder, significantly less than the ratio of 92%, required according to the law.
- (2) By applying only the redistributive tariff of the law, some inverse results occur, i.e. revenue-weak Länder have to pay. Furthermore, transfer quotas (defined as the amount transferred divided by the amount exceeding the average fiscal capacity) exceed 100% in some cases, pushing revenue-strong Länder below the average in unified Germany.

¹ The simulation is taken from Fuest/Lichtblau (1991).

Box 4 (continuation)

According to the different guaranty clauses of the Finanzausgleichsgesetz transfers of revenue strong Länder shall not push these Länder's revenue capacity below the average. In applying these guaranty clauses and in taking into account also vertical revenue-sharing transfers by the Federal level (Ergänzungszuweisungen, see (iii)) the relative position of the different Länder changes as shown in the following table :

Relative revenue capacity of the Länder
before and after horizontal and vertical revenue sharing(*)
- in % of average fiscal-need indicator -

paying Land	before	after	before	receiving Land
Baden-Württemberg	131,0	106,6		
Hessen	130,3	106,1		
Hamburg	120,0	93,0		
Nordrhein-Westf.	119,9	103,7		
Bayern	117,0	103,5		
Rheinland-Pfalz	107,1	102,2		
Schleswig-Holstein	100,2	99,3		
Niedersachsen	98,4	98,2		
		102,0	91,0	Saarland
		97,5	88,1	Bremen
		96,6	52,9	Berlin
		96,5	44,4	New Länder

(*) Transfers include advanced allocation of VAT revenues (Ergänzungsanteil), horizontal revenue sharing (Finanzausgleich) and vertical revenue sharing (Ergänzungszuweisungen).

Source : Fuest/Lichtblau (1991)

All in all, although the East German Länder will start with a comfortable level of debt, their deficits will, by the mid-1990s, be very large and the level of debt will probably exceed the average level of West German debt. Furthermore, the final balance sheet as regards the "old burdens" inherited from the socialist system and the debt taken on by the Treuhandanstalt will be shared between the Federal Government and the five new Länder, adding significantly to the latter's indebtedness.

Local authorities

In Germany the local authorities are responsible for a large part of public investment (around 65%). Since there is a particular need for such investment in East Germany, there seems to be no upper limit on the amount which could be devoted to it as a matter of priority. Leaving aside obvious absorption problems (see part I, section 3), the requisite financial resources will depend on discretionary decisions made elsewhere. Indeed, almost no own financial resources will be available to local authorities in East Germany. The local trade and industry taxes

(Gewerbeertrag- und Gewerbekapitalsteuer) will not be available as a source of revenue for East German local authorities. If anything, investment will have to be attracted by providing local incentives in order to survive in the competition for investment with other potential production locations. Therefore, although a generous provision of financial funds to local authorities would be most desirable in order to stimulate public investment, financial constraints at other tiers of government might prevent this.

Social security system

The social security system will face large imbalances. As recipients of social benefits normally have a low saving ratio, higher transfer payments will have an expansionary effect even if they are covered by higher contributions. The deficit of the social security system will amount to around DM 20bn in 1992. As this deficit will be financed mainly out of financial assets accumulated in West Germany in the past, the expansionary effect will prove significant. Difficulties are likely to persist over the medium term in all fields of social security.

As regards pensions, incorporation of the East German scheme into the general West German scheme since January 1992 will lead to additional payments of around DM 10 bn.³² Moreover, as wages are expected to catch up rapidly with those in West Germany, East German pensions will increase rapidly too. Given the relatively high level of labour-market participation in East Germany, there will be a rather adverse ratio of those eligible for benefits and those paying contributions. This ratio might even deteriorate further if early retirement schemes are introduced to alleviate the problem of mass unemployment in East Germany.

As regards unemployment benefits, the same dynamics might apply. In addition, wage adjustment will also have consequences for the level of unemployment benefits. Moreover, the reservation wages of those workers who are undergoing training or are on special employment schemes (secondary labour market) will impose a heavy burden on the unemployment insurance scheme.

³² See Bundesbank, Monthly Report, November 1991.

Special risks arise in connection with health insurance. Not only the adjustment of the wage level but also the likely adjustment of the wage structure will significantly affect expenditure on health insurance in the absence of market-based checks and balances. Moreover, installing modern equipment in hospitals will increase costs dramatically for the same reason. However, revenue, which depends exclusively on the wage and salary bill, will grow at a much more modest rate since the level of gross wages and salaries will remain relatively low.

Special funds

Over and above the financial imbalances in general government, including the social security system, special funds have been created to provide financial resources for East Germany or to cover financial risks arising from the privatization and reconstruction of the East German economy and in cases where a final decision on burden sharing has not yet been taken. The German Unity Fund was envisaged as providing financial resources of the order of DM 115bn per year until 1994. However, by the end of 1992 the debt will already amount to DM 75bn. Therefore, in order to provide adequate financial resources for the East German Länder and local authorities, an increase of VAT rates was adopted in early 1992. The resulting revenues will help to finance the outlays of the Fund.

The Treuhandanstalt will have a cumulated debt of around DM 150bn by the end of 1992. Prospects are very gloomy as privatization will progress only if responsibility is assumed for more and more financial liabilities so that the many remaining enterprises can be sold (given away). The borrowing limits for the Treuhandanstalt, initially set at DM 10bn, were thus raised to DM 30bn a year. In addition, the Treuhandanstalt will have to take over old and newly accumulated corporate debt if enterprises go bankrupt. This may happen more and more often since the economic future of many enterprises is very uncertain.

All in all, the debt level of those funds which are not directly included in the Federal and the Länder budgets may amount to some DM 450bn (15% of GDP) by the end of 1994. The following table summarizes prospects for public finances in the medium term.

Box 5 : Medium-term prospects for public finance

It is very important to distinguish for different definitions of public budgets : (1) Federal budget, (2) Public Sector balance (Federal, Länder and local budgets, including special funds), (3) General Government (all public budgets including social security, excluding public enterprises), (4) extended public sector, i.e. General Government plus public enterprises, e.g. federal rail and post, East German privatization body, local housing companies. Different figures on the financial deficit can in general be explained by the application of different definitions. Example : In 1991 the deficit of (1) has reached about DM 52 bn, the deficit of (2) was about DM 120 bn, the deficit of (3) has reached about DM 100 bn (West German social security in surplus) while the deficit of (4) may have reached DM 200 bn.

Based on official estimations and projections following medium-term prospects for the development of public debt of the different levels of government are in the offing :

Public debt in bn DM - unified Germany -		
	end 1991	end 1995
(1) Federal Government	601	745
West German Länder	345	410
West German local authorities	119	130
East German Länder	7	110
East German local authorities	10	55
Special funds	98	250
- o.w. ERP	(18)	(45)
- o.w. Fund "German Unity"	(50)	(95)
- o.w. Loan Management Fund	(30)	(110)
(2) Public sector debt	1 180	1 700
- in % of GDP	42,5%	48,5% (a)
(3) General government debt (b)	1 180	1 700
East German privatization body	25	160
Old debt of privatization body	70	70
Old debt of East German housing sector	43	60
Compensation fund for expropriated East Germans (c)	-	20
Federal Rail and Post	140	265
(4) Extended public sector	1 458	2 275
- in % of GDP	52,5%	65% (a)

(a) Assumption : Nominal increase of unified German GDP by 6% p.a.

(b) Potential deficits of social security will not affect public gross debt as this body has large assets, where it will fall back in case of deficits.

(c) This fund has still to be founded.

Source : See Schmidt (1992), Nöbling (1992).

Further risks for public finance exist as regards (1) debt forgiveness for Eastern and Southern countries and (2) export guarantees to Eastern countries. As the debt of the different special funds related to East Germany (privatization body, housing sector and compensation funds) will have to be allocated to the different levels of government in 1995 they should be added to general government debt, bringing the debt ratio to above 57%, which is quite close to the 60% benchmark laid down in the convergence criteria to be fulfilled, if a country wants to enter the final stage of EMU.

3.3 Labour market: wage determinants

One important feature of German unification will be that the German labour market as a whole has to be considered as being fully integrated. This will not only lead to a rapid adjustment of the East German wage level relative to the West German level (interregional wage-demonstration effect) - as has been argued in Section 1.3.3. - but it will also influence the behaviour of German trade unions.

The speed of integration will be very rapid because of cultural, regional and linguistic similarities and one might even suppose that in a few years East-West integration will be more intense than North-South integration. For the time being, labour-market integration is being held back by short-term phenomena such as inadequate transport infrastructure, low flexibility of the East German labour force and inappropriate skills. However, these drawbacks will be short-lived and, by early 1992, there are already around 500 000 commuters (more than 8% of all East German employees), i.e. individuals living in East Germany but working in West Germany.³³

It is perhaps not surprising that real wages in East Germany have risen since monetary union. This was necessary in order to reduce the social cost of labour migration, which would have been important not only in West Germany, mainly in response to the prevailing shortages in the housing sector, but also in East Germany, mainly because of the migration of the most efficient members of the labour force. However, adjustment took place at an astonishingly fast rate, something which is difficult to reconcile with the rapid decline in productive jobs, the counterparts of which are recorded and hidden unemployment. Given the further and probably unavoidable adjustment of labour and job losses, the crucial question is how medium-term wage developments in West Germany will be affected. For the time being, real wages in West Germany are continuing to rise at the same rate as previously, i.e. regardless of labour market developments in East Germany.

³³ See e.g. DIW (3/1992).

First, marked wage discrepancies will affect migration and hence the relative power of the unions in reaching any settlement. Second, rapid wage adjustment would reduce the power of trade unions since it would lead to higher unemployment in East Germany. As high unemployment would also affect migration, trade unions will have to strike an optimum balance between the level of wage discrepancy and the level of unemployment. The crucial determinants are the elasticities of migration with regard to the wage differential and the elasticity of migration of the unemployed, which will probably rise over time. In the case of perfect labour mobility, no wage differential between East and West Germany would emerge and the real fall-back wages for West German workers would depend on the elasticity of real wages with respect to (overall) unemployment. In the more unlikely case of labour immobility, markets could be more effectively segmented.

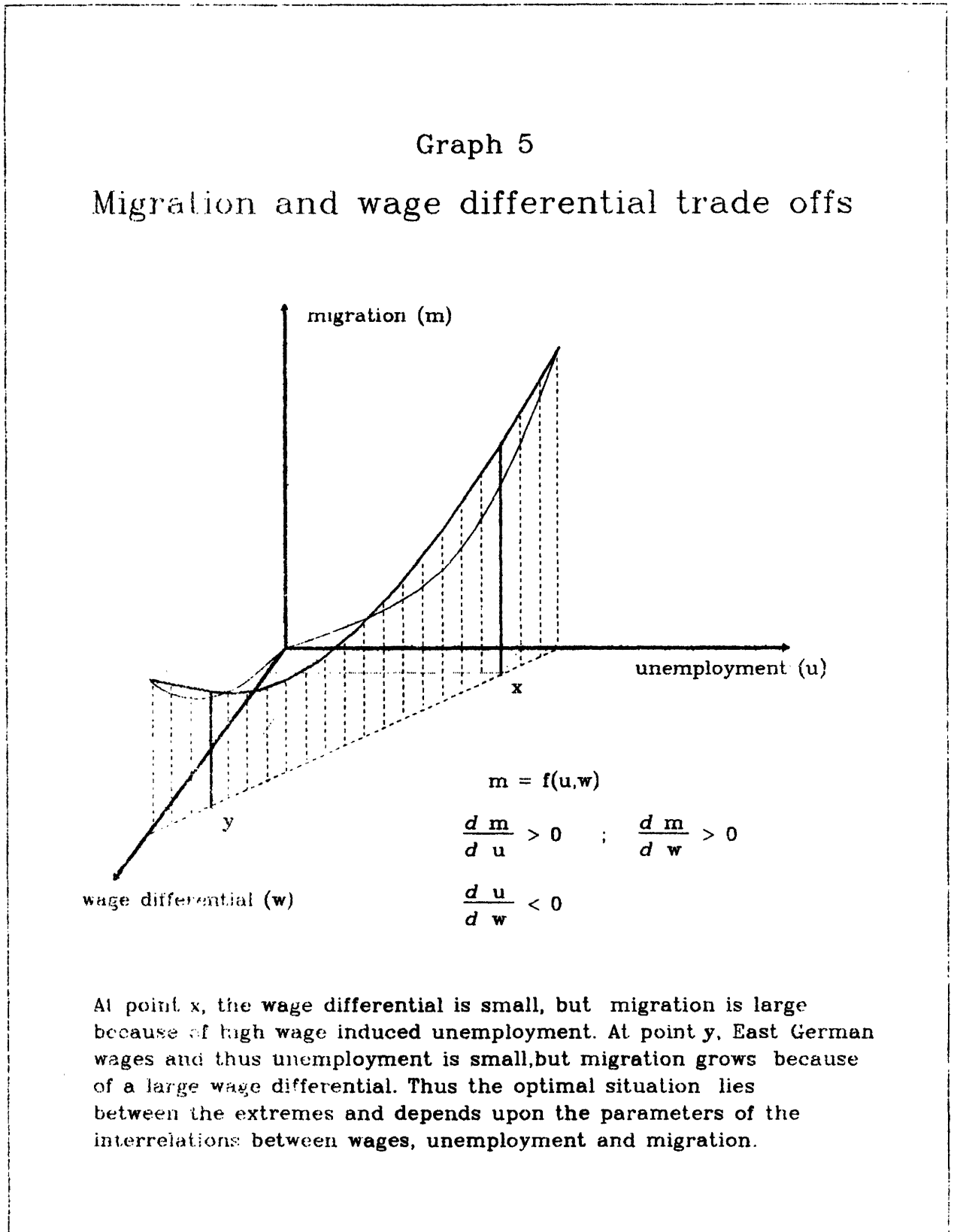
Model-based evidence suggests that the elasticity of real wages with regard to the unemployment rate is around 1,5 after three years. In the case of perfectly integrated labour markets, this means that an increase in overall unemployment rate by 4 percentage points will bring down real wages by 6% in the longer term.³⁴

It is also in this context that subsidizing East German enterprises via the Treuhandanstalt will jeopardize the wage moderation that is needed. Despite rapid wage equalization, unemployment would be lower than otherwise and the trade unions would be able to protect the West German wage level. Therefore, the loose budget constraint which is, for the time being, one characteristic of the transformation of the East German economy could have detrimental medium-term effects on the micro performance of the overall German economy in that the requisite real-wage adjustment will take place with a time lag.

Nevertheless, it can generally be concluded that West German real wages will be below the level at which they would have been without unification, irrespective of the redistribution issue. The extent of this adjustment depends on the degree of labour-market integration, which will probably be extensive.

³⁴ The IMF estimates that an increase in the unemployment rate of 1 percentage point reduces real wages by 2% in the long run. See Coe/Krueger (1990).

The following graph illustrates the different trade-offs.



3.4. Structural policy

Despite recommendations from different quarters,³⁵ discussion of the interrelationship between German unification and the review of structural policies has so far been confined to the issue of providing more financial resources for the reconstruction process. However, there are also a number of more far-reaching issues. There is first the need to review regional policy in Germany as a whole. The special assistance for the former border areas of West Germany with East Germany is certainly no longer justified. These areas assumed overnight a central location not only in Germany but also in Europe as a whole. Since they have no significant infrastructure weaknesses, they now enjoy comparative advantages particularly in relation to the adjacent areas of East Germany. Therefore, in order not to discriminate against the latter as production locations, a rapid revision of these policies is urgently needed. Some initial steps have been taken, however, partly compensated for by newly introduced subsidy schemes, e.g. for the new capital (Berlin).

General investment aids granted by the Länder and local authorities in West Germany will also have to be dismantled. Any incentive in West Germany acts as a disincentive to investment in East Germany. As local and regional authorities in East Germany are experiencing tight constraints as regards their financial room for manoeuvre, such subsidies might jeopardize the East German catching-up scenario in the medium term when investment subsidies in East Germany have to be reduced.³⁶

A particularly important issue relates to sectoral policies. Several sectors in both West and East Germany rely on subsidies. A general decision will have to be taken regarding those sectors where the structural adjustment process needs to be speeded up and those where it needs to be mitigated via subsidies. For instance, the East German coal industry, although not competitive on the world market, is probably more productive than its West German counterpart. If overall German coal

³⁵ Cf. EC-Commission (1990).

³⁶ For an overview of investment subsidies in West Germany, see IFO-Institut (1988) and the Thirteenth Subsidy Report of the Federal Government, Bundesregierung (1991). For an overview of investment subsidies in East Germany compare Bundesministerium für Wirtschaft (1991).

production is not to be increased significantly, adjustment will have to be speeded up in West Germany. Otherwise, the comparatively productive East German coal industry would be unnecessarily cut back in size. What is more, with the same amount of subsidy, more East German jobs would survive as subsidies per employee would be lower.

The same is true of agriculture. Here too, the production structure in East Germany could be made more productive given the large size of newly restructured holdings. And so, although the overall number of those employed will have to decline significantly in East Germany, financial resources could be saved by cutting back production in West Germany and preserving productive structures in East Germany.

As regards labour-market repercussions, such a shift in priorities would also have the advantage that optional jobs are probably more easily available in the areas of West Germany that are concerned since they have a competitive economic structure. In East Germany, regional mass unemployment would be unavoidable.

However, different priorities might have to be set in other areas. In the steel industry, for instance, no genuine productive base exists in East Germany. Steel was made from scrap iron imported from the USSR. Transport costs are extremely high and production methods are very old-fashioned. Given that the steel industry in West Germany and in Western Europe has modernized and rationalized its activities over the last twenty years and since overcapacities exist on the world market, it could be very costly to preserve and modernize steel production in East Germany.

Shipbuilding might be in a similar position. However, more promising challenges might be faced since specialization in specific market segments has, for example, enabled West German shipbuilding to compete internationally.

The efficiency of the West German economy depends to a large extent on its healthy structure of small, medium-sized and large enterprises. In order to establish a similar structure in East Germany, local entrepreneurial potential should be exploited. Otherwise, the danger exists that the main economic decision-making centres will be located in

West Germany. Therefore, attention should be paid to involving East German residents in the privatization process. In addition, investment incentives should be in the form of direct investment aids rather than tax allowances which would favour West German investors to the detriment of East German investors, who face liquidity constraints and will not be able to make profits in the short term. Promoting entrepreneurial skills in East Germany would have effects on motivation which should not be disregarded.

4. *The issue of redistribution*

German unification involved merging two economies with different saving-investment balances. East Germany was an economy in which demand outstripped supply, with excess demand having been suppressed by centrally planned regulation and coordination. West Germany is an economy in which domestic supply has exceeded domestic demand, with excess supply being exported, thereby facilitating the conduct of anti-inflationary policies abroad. Consequently, and despite the huge supply-demand gap in East Germany, the underlying saving-investment balance for Germany as a whole has more or less been in equilibrium.³⁷

Furthermore, the swing in the all-German current-account balance needed following the integration of East Germany was easily achieved in the 1990/91 period thanks to highly integrated international goods markets and spare productive capacities abroad.

In the absence of a significant supply-demand gap in a unified Germany, and with the swing in the current-account balance having been easily achieved, the recently accelerating inflationary pressures in Germany and the subsequent strains regarding the domestic policy mix and international monetary policy can be traced back to the still unresolved question of redistribution in Germany. Indeed, redistribution in favour of East Germany has not yet been a major issue in Germany. In line with its philosophy announced during the run-up to unification and to the elections of 1990, viz. that German unification means "Nobody will be

³⁷ Adjusting the 1991 current-account deficit of unified Germany for cyclical factors (growth in world trade below trend) and one-off unilateral transfers (Gulf war, Soviet Union), the current account returns to balance.

hurt, but a lot of people will feel better off", the Government has always denied that integrating East Germany and adjusting the levels of per capita income in East and West Germany require any attempts at redistribution.

However, alignment of the living standards of East German residents on those in West Germany inevitably raises the issue of redistribution. As both East German productivity levels and productive capacities will be lower than in West Germany, real resources have to be provided to bring about the adjustment in living standards. Moreover, the rebuilding of the East German economy requires additional resources to push up the investment ratio in Germany.

The issue of redistribution has to be assessed from different perspectives. First of all, a larger share of public expenditure in GDP would require a reduction in private-sector expenditure or a reduction (increase) in the current-account surplus (deficit). Within the public sector, the distribution issue also concerns the different levels of government and the shifting of expenditure to East Germany, to the detriment of West Germany. Within the private sector, the issue of who is to shoulder the burden is crucial too. Higher indirect taxes would primarily reduce real disposable income of private households. While higher direct taxes would have similar effects on disposable income, a reduction in subsidies would, as a first-round effect, influence the profit situation of enterprises. As income tax in East Germany will be low during the transitional period, raising direct taxes would place a disproportionately large burden on West German residents while the burden imposed by indirect taxes would more equally - but not necessarily more fairly - shared between East and West German residents.

For the time being, the discussion of redistribution places special responsibility on the labour market. Wage moderation is considered to be necessary in order to preserve a healthy profit situation for enterprises. Therefore, tax-induced price increases should not lead to higher wages. As a consequence, West German wage-earners would bear most of the burden.

As regards the public sector, the transfers necessary to support East Germany have indeed been financed by higher taxes and a much larger

deficit. Only minor attempts have been made to cut back expenditure or to tailor priorities on the expenditure side to supporting East Germany. Furthermore, East-West distribution is severely impeded by the non-inclusion of the East German Länder in the very generous financial equalization mechanism ("Finanzausgleich"). The West German Länder are not therefore cutting back expenditure in order to free real and financial resources for East Germany. In actual fact, the opposite can be observed. The favourable economic situation in the West German Länder, together with the tax increases, has considerably boosted tax revenue, and this has even led to an expansion in public expenditure. Indeed, expenditure by the West German Länder increased by 7% in 1991. Wage developments will also affect the relative financial situation at the different tiers of government. While the central government is less affected by wage increases in the public sector, the Länder and the local authorities will be affected disproportionately by such increases. As regards the Länder and the local authorities in East Germany, the likely wage adjustment will considerably widen the gap between revenue and expenditure, further squeezing the room for manoeuvre in the East.

To sum up, a great deal has to be done to give priority to boosting expenditure aimed to improving economic fundamentals in East Germany. The East German Länder have to be included in the financial equalization mechanism, and expenditures in the West German Länder have to take into account the substantial needs in East Germany. Cutting expenditure is necessary in order to provide financial and real resources, e.g. in the area of infrastructure investment. Not reducing both investment subsidies and subsidies for preserving unproductive activities in West Germany postpones and impedes the emergence of a favourable climate for private investment in East Germany.

Within the private sector, considerable investment has to be undertaken in East Germany and maintained in West Germany in order to create the number of new jobs necessary to absorb the oversupply of labour in East Germany. This requires favourable profit expectations over the medium term. Wage moderation would be one important element. As the German labour market will probably integrate at a rapid rate, downward pressure on wages will increase as the additional inflow of East German labour will dampen wage increases. For this mechanism to work effectively, however, the public sector must not impose a growing squeeze on real

disposable income. Such unprepared tax increases have been mainly responsible for the emergence of the present distribution struggle within the private sector. Therefore, even if cuts in subsidies were to reduce corporate profits in the short term, medium-term wage developments should favour a redistribution of income towards profits, thereby improving the prospects for investment.

Having said this, one can now compare the normative scenario to the redistributive measures actually chosen. Indeed, huge amounts of fiscal resources have been channelled to East Germany. By merging major elements of the West and East German social security systems, i.e. pension funds and unemployment schemes, many billions of D-Marks have been and will be injected into the East German schemes, which are running enormous deficits.

In addition, the very generous exchange rate for the Ostmark has increased the net wealth of East German asset-holders, i.e. private households. It has, however, led to a significant deterioration in the financial position of East German borrowers, i.e. the corporate sector. And so, the achievement of monetary union in July 1990 was already accompanied by a massive redistribution in favour of East German private households, although this was at the expense of the corporate sector in East Germany, including the publicly owned housing sector. Such a redistribution runs counter to the normative rationale of redistribution, according to which real rates of return on East German investment capital should be supported.

Furthermore, sound financing of these transfers has been lacking so far. In the run-up to unification and to the elections of 1990, the Government neglected the need for redistribution. But also after the elections, it did not initiate a constructive redistribution debate. Furthermore, these transfers were not financed via expenditure cuts, namely in subsidies. Since no consensus exists in Germany on the proper financing of the transfer of resources, actual redistributive policy is mainly placing the burden on those groups receiving labour income or transfer income. As a matter of fact, the unresolved question of redistribution has led to a problematic policy mix, i.e. expansionist fiscal policy and tight monetary policy, while consumers, wage-earners and transfer-recipients

(In West Germany) will have to pay for the "free lunch" offered to East Germany. However, as the trade unions seem unwilling to pay the bill which the Government has placed before them without any consultations taking place, a major redistributive conflict lies ahead in (West) Germany which may undermine the social consensus, the business and consumer climate and the positive investment conditions necessary for dynamic investment and growth.

III. THE UNITED GERMANY IN EUROPE : ECONOMIC ASPECTS

1. Introduction

The changes which have taken place in Europe in recent years will have far-reaching implications for the European Community (EC). They include the economic effects of German unification. All EC countries have been affected significantly. First, German unification triggered demand effects which stimulated economic activity in the other EC countries. These expansionary effects have been partly offset by tighter monetary conditions in Germany. Although, in the short term, this state of affairs was beneficial to the other EC countries, the question as to whether the changed policy mix in Germany might affect them adversely in future is important. The medium-term economic implications stem from the catching-up process and the integration of East Germany into the EC economy but also from the growing amount of trade with Eastern Europe.

While Section 2 below concentrates on these economic implications, Section 3 is concerned with politically significant questions of European economic integration. Section 3.1 attempts to evaluate the consequences of economic imbalances in Germany for the process of economic integration in the context of economic and monetary union (EMU). Internal market questions are important too, since the economic weight of Germany and German enterprises in the internal market will probably increase (Section 3.2). Not only the opening of the internal German border but also the restructuring of Eastern Europe require large amounts of capital. The question as to whether those countries involved in a catching-up process within Western Europe will be faced with a setback are important too (Section 3.3). Finally, Section 3.4 deals with the EC's options vis-à-vis Eastern Europe. It will be argued that, in order to improve economic prospects in Eastern Europe, a policy of opening up markets is more effective while, in the case of barriers to market entry, those countries will have to be supported by transfer payments in order to avert large-scale movements of labour. In conclusion, it will be examined whether German unification can serve as a model for the transformation of Eastern Europe or whether the same effects can be expected with the EMU process. It will be found that German unification does not provide a blueprint in either case but that it can provide important lessons.

2. Short-term and medium-term effects on the EC economy

2.1 Demand effects

All the other EC countries, together with the EFTA countries, the United States and Japan, have increased their exports to Germany significantly. In the first place, the major shift in the preferences of East German consumers in favour of Western products, coupled with supply shortages, have stimulated imports from the other EC countries. While some countries, notably Denmark, the Benelux countries and Spain, increased their share of the enlarged German market immediately, other countries took longer. France, Italy and the United Kingdom in particular, but also the United States and Japan, have recorded the highest growth rate of exports only after one year of German unification. Table 4 shows the percentage increases in exports to Germany after unification. It suggests that, in those countries which have increased their exports only with a time lag, the positive demand effect is longer-lasting.

TABLE 4 : GERMAN IMPORT PERFORMANCES AFTER UNIFICATION
- % change on the same period a year earlier -

	3rd quarter 1990	4rd quarter 1990	1st quarter 1991	2nd quarter 1991	3rd quarter 1991	4th quarter 1991
Belgium + Lux.	12,1	31,9	29,0	27,0	13,6	-5,1
Denmark	22,5	31,3	33,9	29,2	16,0	4,8
Spain	30,3	38,0	46,7	41,2	25,2	11,4
France	15,0	10,6	20,9	38,5	19,4	6,9
Greece	3,5	8,4	8,1	4,9	19,4	2,6
Ireland	11,7	6,9	13,6	13,3	17,0	11,3
Italy	17,4	20,1	22,0	19,1	18,0	2,8
Netherlands	8,7	17,1	20,8	18,4	5,6	1,0
Portugal	17,5	20,1	22,5	21,5	18,5	11,7
United Kingdom	7,1	13,4	17,5	21,6	16,5	4,4
EEC	13,3	18,6	23,1	25,8	15,3	3,2
Other countries						
United States	-0,9	-9,6	2,3	20,7	30,8	11,2
Japan	7,2	2,7	14,8	32,2	26,2	9,1
TOTAL	10,5	14,5	18,0	23,3	17,4	4,0

Source : Bundesbank, Monthly Report, Supplement 3

There is no doubt that these demand effects have stimulated economic growth in the other EC countries at a time when growth was slowing down. The actual stimulus to growth depends on several factors. The larger the share of exports to Germany in GDP, the greater the effect on growth. Table 5 suggests that the short-term stimulus to growth due to higher exports was significant in all EC countries, ranging from 0,6% (both years) in Spain to 1,6% in Benelux. German unification has, therefore, actually had a locomotive effect.

However, substantial leakages through additional imports in small open economies would reduce the direct impact on GDP but would have stimulating effects in other countries. In order to answer the question of how GDP growth has been stimulated in partner countries as a consequence of these first-round and second-round effects, the DIW has carried out a model simulation with the EC-Quest model, taking into account the importance of the German market for the respective countries and the reduction effect due to import leakages. As Quest was used in its linked mode, the secondary spill-over effects vis-à-vis third countries were taken into account.³⁸

Also according to this simulation, growth effects on partner countries have been significant, despite the parallel tightening of monetary conditions. The results, however, have to be qualified in at least two respects. First, the short-term effect on partner countries might have been even larger since supply constraints led to a less aggressive attitude on the part of German exporters. The weak export performance was due not to weaker price competitiveness but mainly to slower growth abroad and tight supply conditions in Germany following unification. As a result, partner countries were able to gain market shares from Germany on their home markets and in those countries in which they compete with Germany.

Second, tighter monetary conditions in Germany might have had restrictive effects in partner countries. This transmission mechanism has been underscored inter alia in studies by the OECD and the IMF.³⁹

³⁸ See DIW (32/1991) and also Horn/Scheremet/Zwiener (1991).

³⁹ See OECD (1991) and Masson/Meredith (1990).

Table 5 : SHORT-TERM GROWTH EFFECTS OF GERMAN UNIFICATION
FOR PARTNER COUNTRIES

	- Increase in GDP growth in percentage points -	
	July 1990-June 1991	July 1991-June 1992
Belgium/Luxemb.	0,6	1,0
Denmark	0,4	0,7
Spain	0,2	0,4
France	0,3	0,5
Greece	0,4	0,7
Ireland	0,3	0,8
Italy	0,3	0,6
Netherlands	0,7	0,9
Portugal	0,3	0,4
United Kingdom	0,2	0,5

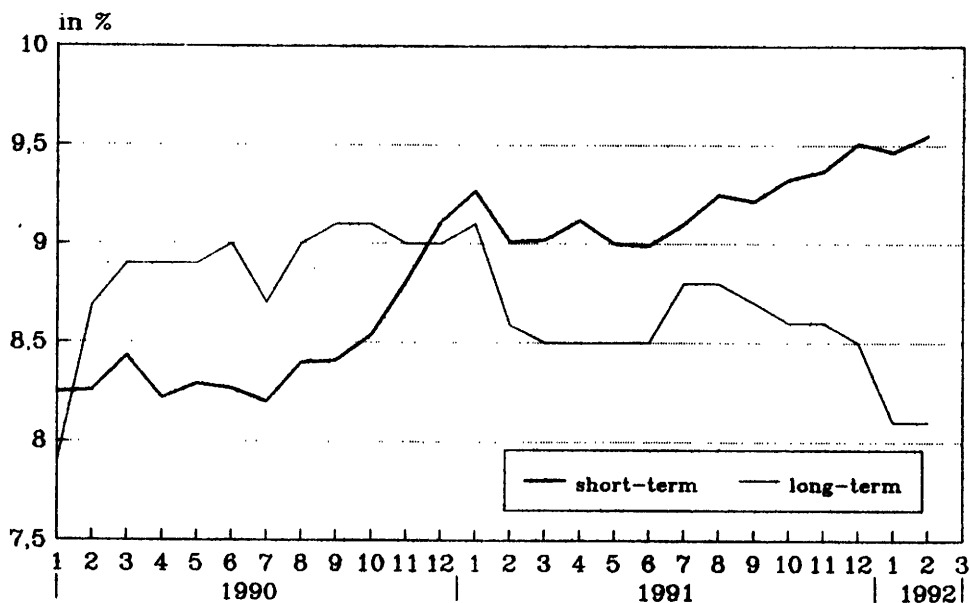
Source: Commission services.

2.2 Monetary effects

The monetary effects of German unification on partner countries are difficult to evaluate empirically. The increase in interest rates occurred primarily in Germany. Financial markets reacted very sceptically to the announcement of monetary union and long-term interest rates in Germany jumped by almost 200 basis points. Short-term interest rates were not increased until monetary union became effective in July 1990. Since then, short-term interest rates have been increased on several occasions by the Bundesbank, but long-term interest rates experienced a downward trend. Graph 6 depicts these movements in interest rates in Germany.

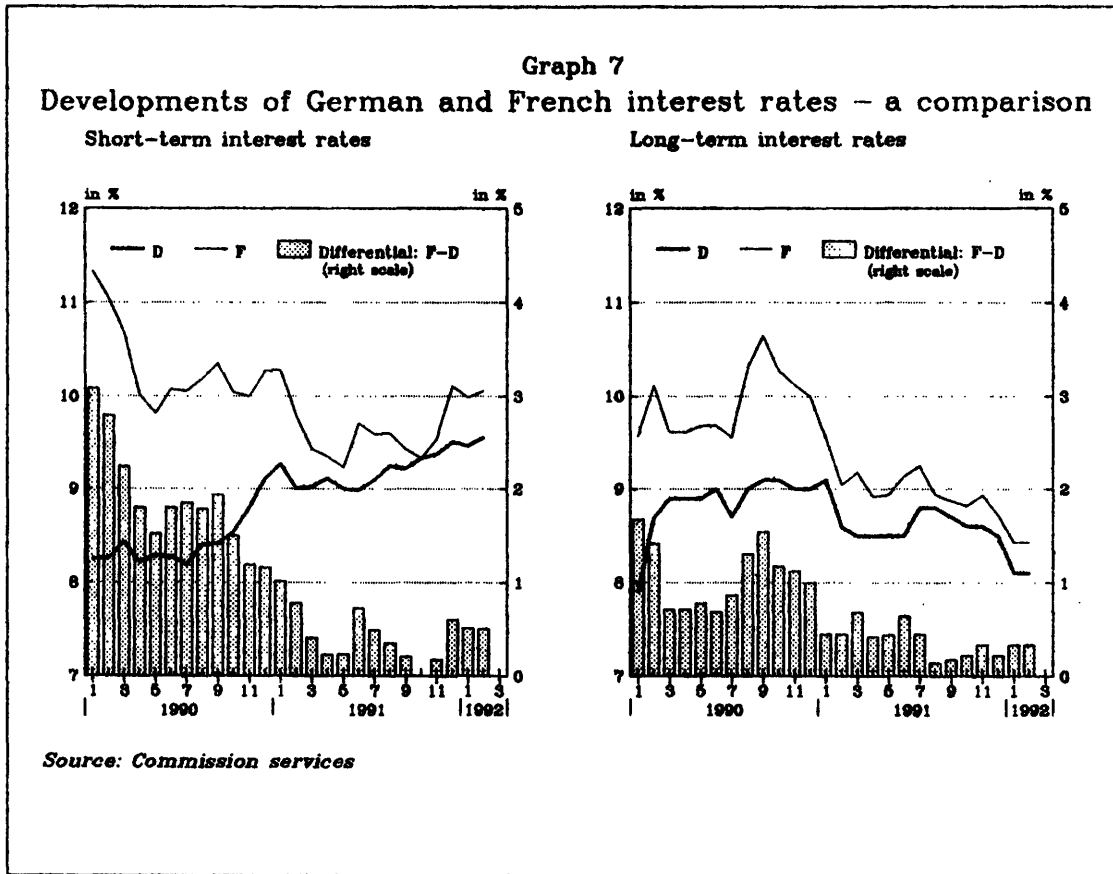
Interest rates rose to a much lesser extent in the other EMS countries and the interest-rate differential narrowed significantly in February 1990, when monetary union was announced. Thus, German financial markets attracted a larger risk premium. Moreover, the increases in short-term interest rates have not been reproduced in full in the other EMS countries and the interest-rate differential almost disappeared vis-à-vis some countries. In France, the authorities were even able to reduce short-term interest rates when German rates were on an upward trend, and the differential with the D-Mark at times actually became negative. Graph 7 shows interest-rate movements within the EMS.

Graph 6
Short and long-term interest rates
in Germany since early 1990



Source: Commission services

However, in order to evaluate the monetary impact, which, judging by interest-rate movements, does not appear to be very significant, actual interest-rate movements have to be examined in the light of the level which would have prevailed without German unification. In such a scenario, economic activity would probably have slowed down considerably and Europe would have conducted a more expansionary monetary policy. Therefore, short-term interest rates in particular would have been much lower, although the effect on long-term interest rates would have been less pronounced. Indeed, while monetary relaxation in the United States, where short-term interest rates declined by 250 basis points during 1991, led to a decline in long-term interest rates of only 70 basis points, French long-term interest rates fell by 110 basis points over the same period, with short-term interest rates declining by only 30 basis points.



Monetary tightness does not depend solely on interest rates but also on the level of the exchange rate. The question as to what the exchange rate would have been without unification is, of course, very hypothetical. On the one hand, the larger risk premium attached to the D-Mark – a reflection not only of German unification but also of economic problems in the countries of Eastern Europe – has certainly weakened the D-Mark. Therefore, in the absence of unification and with monetary loosening in the United States, the dollar would have been much weaker. On the other hand, a more expansionary stance of European monetary policy would have supported the dollar. Therefore, the level of the dollar might not have been unduly affected by the combined impact of German unification and the corresponding economic policy response.

2.3 Medium-term effects

German unification will have long-lasting economic effects on both the German and the European economy. As regards trade, a certain normalization will take place as the short-term demand effects fade. This

will affect first the composition of products in demand in East Germany. In the short term, consumer durables have been imported while, in the medium term, investment goods are needed to boost the catching-up process in East Germany. Nevertheless, all countries will probably have the opportunity to run a substantial trade surplus with East Germany. First, trade links similar to those with other industrialized countries will be established. Second, the export capacity of East Germany will remain very low until a modern capital stock has been created. Third, the import propensity of East Germany will be high because demand will exceed productive capacity for a long time to come. This gap will be particularly wide if expectations in East Germany are positive.

This favourable situation will, however, change gradually over time if investment in East Germany increases supply. Given that most of the revamped East German economy will be based on a new and thus very efficient capital stock, the extra supply generated will probably be highly competitive. Since the infrastructure will also be considerably improved, the new East German economy might display similar features to those of the West German economy in the 1950s and 1960s, when the capital stock embodied greater technical progress relative to that of other countries.

For the West German and the European economy, this would imply keener competition since German monetary union would prevent an adjustment of the East German exchange rate in line with rising productivity. Therefore, to the extent that the catching-up process was successful, the East German economy would be able to compete within the internal market.

The medium-term monetary implications of German monetary union are less certain. Indeed, a dilemma might arise in the EMS countries to the extent that tighter monetary conditions might become necessary in Germany in order to support the structural adjustment and catching-up process in East Germany without engendering inflationary pressures. It has to be recognized that any persistent gap between demand and supply and/or an inflationary redistribution struggle will necessitate an adjustment in the real exchange rate which can be achieved via a nominal exchange-rate adjustment or via higher inflation. Clearly, higher inflation is not the preferred option for the Bundesbank.

If tighter monetary conditions become necessary in Germany in order to avoid the inflationary consequences of the distribution struggle (the successful catching-up scenario), strains might then develop in the EMS since monetary tightening might be inconsistent with the domestic needs of those countries.⁴⁰ The dilemma for the other countries would then be aggravated by implications of a realignment in terms of negative credibility. These might be somewhat reduced if the D-Mark appreciated against all other EMS currencies. Financial markets would then consider the realignment as having been triggered by developments within Germany. Moreover, a D-Mark appreciation against all other EMS currencies would be less detrimental to the convergence process in the EMS.

Over time, a real depreciation of the D-Mark will be needed if higher investment is adding to aggregate supply. This adjustment will probably be much more easily achieved via lower inflation in Germany than elsewhere. Therefore, in the medium term and given an initial real appreciation of the D-Mark, nominal exchange-rate stability would be consistent with some divergence in inflation rates in the EMS, i.e. an inflation differential in favour of Germany.

3. *Aspects of European economic integration*

3.1 *Economic imbalances, the convergence process and EMU*

The changed performance of the German economy will affect the progress which can be made on the road to EMU. Inappropriate policies in Germany but also in partner countries could render it more difficult to achieve that goal on time. For political reasons integration might be stepped up in the world of growing uncertainties.

As regards the fundamental issue of EMU, German unification has altered the role of the D-Mark as the anchor within the EMS. Defining the appropriate stance of monetary policy has become more difficult given both technical problems and the increased uncertainties attaching to economic prospects. Technical problems concern the timing and extent of

⁴⁰ See e.g. Adams/Alexander/Gagnon (1992), who show that German unification will have a contractionary effect on the other EMS countries, if monetary policy in partner countries is geared to maintain fixed nominal parities vis-à-vis the DM rather than towards internal balance.

the likely adjustment of the financial portfolios of East German residents. The velocity of circulation is expected, therefore, to increase significantly. On the other hand, large increases in East German prices will increase the value of transactions and should be reflected in the target rate set by the Bundesbank.⁴¹ Uncertainties in interpreting financial variables also concern interest rates. An autonomous increase in long-term interest rates could be due either to an increase in inflationary expectations and an expected future tightening of monetary policy or to an increase in the real rate of return. Therefore, movements in real exchange rates will become more important.

To the extent that intermediate monetary indicators in other countries remained relatively more reliable, the anchor role within the EMS would be transferred at least in part to those countries. On account of its relative size, this is primarily a reference to France.⁴² However, the latitude afforded by the narrowing interest-rate differential with Germany should not be used at the expense of price stability. All in all, the question of the optimality of the asymmetry which has so far characterized the working of the ERM should be reconsidered in present circumstances.

Indeed, other countries in the EMS will have the opportunity to improve their relative competitiveness vis-à-vis Germany by temporarily undershooting German inflation. Some countries, in particular those which have emerged from a long stabilization period with a permanent appreciation in their real exchange rate, need a readjustment in their real exchange rate in order to boost employment or to reduce the danger of job losses in the more competitive internal market. If such depreciation in the real exchange rate were to occur without any realignment, positive credibility effects would be substantial.

⁴¹ The annual target for the growth of M3 is based on assumptions of "unavoidable inflation", "growth of productive potential", "changes in velocity" and "monetary conditions". Since price movements in East Germany still reflect the adjustment to market prices, "unavoidable inflation" in East Germany might be above 10% for the next few years. This should be borne in mind when the target range is calculated.

⁴² Considering the size of its economy, the United Kingdom could, of course, also attempt to play the anchor role in the ERM. However, a number of fundamentals as well as the Government's misgivings regarding monetary union are major obstacles in this respect.

Nevertheless, as regards the functioning of the EMS, it has always been argued that domestic demand shocks should not be remedied by non-monetary means. The particular case of German unification involves a significant domestic shock⁴³ in the anchor country. Therefore, as regards the functioning of the EMS, correcting fiscal policy and implementing structural policies aimed at opening up markets and reducing subsidies would be the very-best option.

At the micro level, (West) German industry in general should not be expected to favour Eastern markets more than traditional Western markets. On account of the likely undervaluation of the Eastern European currencies, exports to these countries will probably not consist of high-technology products (the exception being East Germany which, because of the overvaluation of the D-Mark relative to productivity, will probably seek to purchase such products). However, new production activities in East Germany may try to focus more on Eastern European markets by rebuilding "traditional" trade links. And so, if exports to traditional markets were to continue, Germany could become even more closely integrated through accelerating imports.

At the macro level, the counterpart - in accounting terms - of the German current-account surplus has been the deficit in certain partner countries. Catching-up might, therefore, prove more difficult, especially as higher interest rates will have to replace higher imports in order to increase the disciplinary effects on the public sector and some investment might be crowded out. In other words, an overvaluation of the currency might become less easily sustainable if autonomous capital inflows dried up. Therefore, countries that are catching up may have to postpone their economic alignment on the average EMS level if German unification significantly increased capital shortages on the world financial market.

All in all, it should be clear that, as long as the main principles of macroeconomic and microeconomic behaviour are largely consistent, for example, with the level of savings, profits and wages and with stability-oriented policies, neither German unification nor developments

⁴³ In terms of economic theory, we witness a "permanent taste-change shock", i.e. East German demand has shifted away from East German supply, rendering East German productive capacities obsolete.

In Eastern Europe should alter the long-run prospects of achieving stronger monetary integration in Europe.

3.2 *United Germany and the Internal market*

German unification took place at a time when European integration was proceeding fast. In particular, the transformation of the internal market concept into actual economic measures was speeding up. Integrating East Germany into this process of European integration thus resembles a greyhound (East Germany) attempting to catch up with a racehorse (EC). The outlook for East Germany depends on whether it develops into an attractive location within the European internal market.

However, as the challenge of integration proved too much in the short term, many derogations from EC legislation were adopted⁴⁴ with a view to spreading out the necessary adjustments over time. These derogations concerned in particular environmental aspects, transport rules but also subsidies. Particularly important were those derogations which allowed the West German authorities to take measures fostering private investment (see the description of these measures in Part I). Generous derogation clauses were politically feasible only on condition that they applied to all European companies wishing to do business in East Germany.

Although this criterion has generally been met, lopsided effects benefiting West German enterprises cannot be excluded. For example, if investment subsidies are granted in the shape of depreciation allowances they will favour West German enterprises. Similar effects might be expected if privatization proved successful only through the granting of special tax allowances to companies. As a result, it might be easier for West German enterprises to expand in the medium term. Since EC analyses have shown that the attainment of optimum size and the presence of economies of scale will be the main transmission channels for higher growth in the internal market, the position of German enterprises in the internal market might be stronger than would otherwise be the case.

Moreover, in view of its central position in the new Europe, Germany will affect the forces of gravity. While the West German economy occupied in

⁴⁴ Commission of the European Communities (1990a).

the past a peripheral location in the Community, it can now act as the bridge between the EC countries and the countries of Eastern Europe. This makes Germany more attractive as an investment location. In particular, those industries which need skilled labour and for which there is a demand in Eastern Europe might find it attractive to build new plants in East Germany.

3.3 Investment needs and catching-up of the peripheral Community countries

The enormous amount of capital which is needed to reconstruct the East German economy might have implications for the catching-up process in the less-developed EC countries. Since the German current-account surplus has now disappeared, the Community has become an importer of capital. This has contributed to the increasing scarcity of capital in the world. However, the actual impact of German unification on the rising level of real interest rates may be small in quantitative terms. Other factors such as the general opening-up of Eastern Europe and the Soviet Union are more important and suggest that the level of real interest rates will probably remain relatively high in future.

The real-interest-rate effect on the catching-up process in the less-developed EC countries will, of course, be to crowd out the least productive investment projects. However, the countries concerned could at their discretion protect or increase the rate of return. Appropriate policies might therefore compensate relatively easily for the real-interest-rate effect.

A further question is whether East Germany will affect the expected rate of return directly. If investment currently being undertaken in industries enjoying a comparative advantage in the less-developed Community countries were to become more profitable in similar industries in East Germany, the shift in investment would take place. However, the risk of direct competition between East Germany and the catching-up countries is low. The comparative advantages are different. East Germany will not be a low-wage country. This, however, is still the main factor making investment attractive in the catching-up countries. There is, therefore, little risk that planned investment projects will be shifted from the catching-up countries to East Germany. Of course, the situation

is different in the Eastern European countries where low real wages will be a decisive factor in the catching-up process. These are the countries that will compete with peripheral EC countries for real investment.

4. Lessons for Europe

German economic, monetary and social union, as well as the political unification of the two countries have attracted attention as possible models for both Western European integration and Eastern European transformation. At the end of this paper, we would like briefly to turn to this issue.

4.1 German unification and Western European integration

The dramatic slump in the output of East Germany's productive sector after monetary union is often quoted as an example of what might occur if two extremely different economies were to form a monetary union. However, such comparisons miss the point in so far as the sharp fall in activity in the East German economy was not caused by introducing a new legal tender (monetary integration) but by the exposure of the economy overnight to world market competition (real integration). Thus, it was not the abolition of the exchange-rate instrument (monetary protection) but the abolition of rigid trade barriers (real protection) which caused the collapse of the East German economy, ill-equipped as it was to survive in world-market conditions (although the 300% real appreciation in the Ostmark certainly magnified the existing problems). This led to what is called a permanent taste shock, leading to the disastrous developments for East German productive potential. Nevertheless, it is worthwhile examining some issues regarding Western European integration, namely (i) the consequences of the integration of factor and goods markets for price and wage levels and inflation rates, (ii) the evolution of productivity, wages and the wage-demonstration effects and their repercussions on the investment climate, (iii) the need for real exchange-rate adjustment when national savings-investment balances change, and (iv) the role of, and preconditions for, significant public transfers within the EC.

As mentioned earlier, the integration of the West and East German economies has led to an equalization of price levels for goods on both

markets. The price of services is also converging rapidly and the same is true of the price of labour. In the case of German unification, a very pronounced wage-demonstration effect was to be expected, pushing East German wages to levels unjustified by productivity performance. Indeed, the integration of factor and goods markets in Germany has accelerated the process of real convergence while the convergence of inflation rates in both parts of Germany will be achieved only after the adjustment period.

However, this does not imply a convergence of supply-side conditions since the convergence of productivity levels lags behind the convergence of wage levels; this, in turn, implies a significant downward adjustment in employment within low-productivity sectors in East Germany. In the case of the European integration process, if a similar wage-demonstration effect were to operate after the introduction of a single currency, the required convergence of supply conditions would be put at risk. However, as the European labour market is much less integrated than the German labour market, more significant wage differentials should be sustainable without large-scale labour movements and any wage-demonstration effect should be less pronounced than in Germany.

Given the uneven structure compared with other EC countries, there is thus every reason to be cautious in drawing unduly far-reaching conclusions from a comparison between EMU and German monetary union. In an economic sense, German unification means that two very distinct types of labour force are integrated to an extent which will be observed only in the very long term in Europe. They differ substantially in size, productivity and sectoral structure of employment whereas their level of education and vocational skills diverge to a lesser extent.⁴⁵

German economic integration suggests that the marginal rates of return on investment converge as the integration of capital markets proceeds. The same will be true in the Community context. However, as labour will be less mobile in the Community, participating countries will be able to achieve the appropriate rate of return on investment through differentiated real wage levels, an option which is not available to East Germany.

⁴⁵ See also Franz (1991).

German unification has been accompanied by a marked shift in the national savings-investment balance as a consequence of a huge supply-demand gap in East Germany. This shift, however, has been easily achieved without major distortions of world trade and capital markets and without the sometimes predicted significant real appreciation of the D-Mark. The substantial adjustment in Germany's bilateral trade balance has not necessitated significant price changes; adjustment was facilitated by the existence of excess capacity abroad which enabled producers to adjust their output easily without the need to crowd out domestic demand via a real appreciation of the German currency. Furthermore, international (European) markets have reached a high level of integration at which the cross-border transaction costs of trade have been reduced to such an extent that substantial signals are no longer required to stimulate cross-border trading. Consequently, there is an increasing likelihood that the hoped-for catching-up processes in the peripheral countries in Europe and the necessary changes in current-account balances might also be achieved without seriously affecting real exchange-rate movements in the Community. Indeed, given favourable conditions for investment, financial integration facilitates the catching-up process as the current account constraint is alleviated.

In the German case, the need for very substantial transfers to support the East German economy is due to the inadequate level of competitiveness in East Germany, which was made worse by the introduction of the D-Mark. As such difficulties are much less acute in Europe, there will be no need for public transfers of a similar magnitude. The German case also indicates that large-scale and unilateral public transfers become relevant only after the harmonization of regional systems of taxation and social security has taken place.

4.2 *German unification and Eastern European transformation*⁴⁶

The East German economy was supposed to be the most modern and most competitive among the newly liberalized economies in Eastern Europe. Consequently, the collapse of the East German economy after the introduction of market conditions has been a disappointment for those in favour of transforming other Eastern European economies via a

⁴⁶ See also : IMF (1991) and Fels/Schnabel (1991).

once-and-for-all shock. However, the German experiment was unique in many respects and need not be imitated by other Eastern European countries; in any event, those countries do not have a donor prepared to stabilize purchasing power and per capita income over the painful adjustment period. A fiscal constraint and a severe current-account constraint force these other Eastern European countries to look for different approaches to the transformation of their economies. Nevertheless, some issues and experiences from the German case are of interest in this respect.

German monetary and political union has facilitated two of the three major tasks in transforming a centrally planned economy into a market economy.⁴⁷ Firstly, it has allowed the introduction of the legal framework for a market economy without any time-lag. Secondly, it has facilitated macroeconomic management since, unlike in other Central and Eastern European countries, no major inflationary problems are emerging and functioning financial markets are providing the capital needed for the rebuilding of the East German economy. However, monetary union may have made the third essential task considerably more difficult, i.e. microeconomic adjustment. In this respect, the introduction of the D-Mark and the merging of the two German economies have shortened the transitional period and led to enormous pressure for the rapid introduction of market behaviour.

For Eastern European countries, the exchange rate and foreign trade policies required will be quite different. Rapid integration into the world economy, involving the introduction of a convertible currency for external and internal transactions, will lead to significant market losses for Eastern producers in the absence of effective import barriers. However, adverse consequences for output, employment and production-related income can be mitigated via appropriate macroeconomic management. Existing budgetary constraints may restrict the stabilization role of fiscal policy so that temporary protection for the market via the exchange rate and other instruments will be crucial for a successful transition. Indeed, management of the external sector should consider not only the export but also the import performance. In order to restrict the import of consumer goods and to foster a restructuring of

⁴⁷ See Siebert (1991).

the domestic capital stock with the help of cheap imports of investment goods, appropriate measures to discriminate against imports of consumer goods in favour of imports of investment goods seem desirable. Import barriers, preferably in the form of tariffs on consumer goods that will be phased out over time, may alleviate some of the pressure on domestic producers and may generate some additional revenue for the public sector. Such revenue is desperately needed since an efficient social security system will have to be established to cope with high unemployment, and a redistribution in favour of transfer income will be unavoidable as production falls.

Box 6 : Tariffs and subsidies versus the exchange rate instrument
 - a stylized view on potential policy choices for Eastern European economies -

Goal	Tariffs on imported consumer goods	Instrument	Depreciation
Attract foreign investment via - low wages - low taxes - cheap investment goods	net effects negative supports goal supports goal		detrimental to goal detrimental to goal detrimental to goal
Foster competitiveness on domestic market via - low production costs - high prices for competing imported goods	neutral supports goal		detrimental to goal supports goal
Foster competitiveness on foreign market via - low production costs - export subsidies	neutral net effects negative		detrimental to goal supports goal
Balancing public finance Keeping inflation under control	supports goal net effects negative		neutral detrimental to goal

Recommendation : import tariffs on consumer goods and contract with trade unions not to include into wage claims higher inflation as a result of higher import prices.

In the case of Germany, the replacement of the non-convertible Ostmark by the convertible D-Mark in conditions of a 300% appreciation created a significant convertible-currency money stock immediately; this, in turn, permitted the financing of an important inflow of consumer goods and crowded out domestic production. The existence of a fiscal constraint in other Eastern European countries and the need to import modern investment goods means that they will not be able to run similarly large deficits

on the trade balance for consumer goods. In fact, the absence of healthy domestic hard-currency savings means that these countries need a healthy trade surplus in consumer goods to finance the necessary modernization and expansion of the domestic capital stock.

In the short term, East Germany might not benefit at all from its integration into the internal market of the EC. On the one hand, East German producers could not make use of unlimited market access since they did not manufacture any competitive products. On the other hand, they were not allowed to discriminate against products of EC origin. Eastern European countries could perhaps do so. Furthermore, they could probably benefit from unlimited access to the EC market, as some of their products, e.g. raw materials, are already competitive without being heavily subsidized. Such market access could make it easier to achieve a trade surplus. It would also reduce the need for unilateral public transfers from Western to Eastern Europe.

Wage levels in mid-1990 and developments thereafter have been a major obstacle to successful restructuring of the existing capital stock in East Germany. Indeed, enterprises' limited financial resources, desperately needed for investment purposes, went to finance an excessively high wage and salary bill. In transforming an economy, there is obviously a severe risk that wage and productivity developments will be out of step. In the case of East Germany, wage-formation processes have been dominated by a very closely integrated all-German labour market, balling-out by West German taxpayers and other socio-cultural processes. Other countries in transition may witness similar developments as a result of a price-wage-price spiral following devaluations and gradual adjustments of regulated prices to market prices. Such a price-wage-price spiral has at least been avoided so far in East Germany since the choice was for an overvalued exchange rate and a one-off price adjustment when the new and convertible currency was introduced.

With unification, the West German economic, social and legal system was copied in East Germany. In general, this has underpinned market forces and has encouraged foreign (so far mainly West German) direct investment. However, as explained in earlier sections, direct investment has not yet proved as buoyant as anticipated. The weakness of direct investment stems

mainly from uncertainties over the approach to be adopted in dealing with the remnants of the old system, namely uncertain property rights in land and capital, enterprise debt and ecological burdens. The slow pace of foreign direct investment in East Germany indicates that Eastern European countries should avoid shifting the burden of the old system onto foreign investors.

Moreover, these countries are in direct competition with peripheral Western European countries and with countries in Africa, Asia and Latin America for direct investment flows. Even in East Germany, notwithstanding its very generous investment schemes, foreign investors are not numerous and the volume of West German investment in East Germany should be considered as a special case and unlikely to be repeated in other parts of Eastern Europe. Consequently, countries in transition will have to place great reliance on domestic private capital to finance the take-off of the economy. For this a very favourable investment environment is needed. Such an environment would provide an appropriate economic framework accompanied by generous tax incentives for investment outlays. The services sector will grow almost automatically once the outlook for domestic purchasing power improves. As regards privatization of the existing capital stock (in manufacturing), the fiscal revenue aspect should not dominate the design of programmes in the countries in transition, as the effect on net revenue will in any case be quite marginal. Furthermore, a dynamic privatization process alleviates fiscal pressure on the public budget and should, therefore, be a top-priority task in these countries, given the fiscal constraint they face.

The East German administration and public investment schemes play a key role in coping with the challenge of the economic catching-up process. A shortage of skilled administrators and operational public investment plans has hindered the transformation process up to now. However, as both are now improving, prospects for a rapid recovery after the deep slump have improved significantly. Consequently, the administrations elsewhere in Eastern Europe should prepare for these challenges by deciding as quickly as possible on the legal, administrative and economic rules to be implemented, so that they can start to prepare administrative structures for these new challenges.

References

- Adams, G./Alexander, L./Gagnon, J. (1992) : German unification and the European Monetary System. A quantitative analysis, in : Board of governors of the Federal Reserve System (ed.), International Finance Discussion Paper No. 421, Washington, D.C.
- Akerlof, G.A. et al. (1991) : East Germany In From the Cold. The Economic Aftermath of Currency Union, Brookings Papers on Economic Activity, No. 1/1991.
- Begg, D./Portes, R. (1991) : "There is a Better Way ...", in : Herald Tribune, 19.6.1991.
- Bundesministerium für Wirtschaft (1991) : Wirtschaftliche Förderung in den neuen Bundesländern, Bonn.
- Bundesregierung (1991) : Dreizehnter Subventionsbericht, Bundestagsdrucksache 12/1525.
- Burda, M.C. (1990) : The Consequence of German Economic and Monetary Union, in : CEPR Discussion Paper Series No. 449, London.
- Burda, M./Funke, M. (1991) : German Trade Unions after Unification. Third Degree Wage Discriminating Monopolists ?, CEPR Discussion Paper Series No. 573, London.
- Coe, D.T./Krueger, Th. (1990) : Wage Determination, the Natural Rate of Unemployment, and Potential Output, in : Lipschitz, L./McDonald, D. (eds.), German Unification. Economic Issues, IMF Occasional Paper No. 75, Washington, D.C. pp. 115-129.
- Commission of the European Communities (1990) : Germany, Economic Papers, Country Study No. 1, Brussels.
- Commission of the European Communities (1990a) : The European Community and German Unification, in : Bulletin of the European Communities, Supplement 4/1990, Brussels, Luxembourg.
- DIW (1990) : DDR-Wirtschaft im Umbruch. Bestandsaufnahme und Reformansätze. Kurzexpertise für den Bundesminister für Wirtschaft im Rahmen der Strukturberichterstattung, Berlin.
- DIW (1991) : Gesamtwirtschaftliche und unternehmerische Anpassungsprozesse in Ostdeutschland, 1., 2., 3. und 4. Report, DIW-Wochenbericht No. 12/1991, 24/1991, 39-40/1991 and 51-52/1991, Berlin.
- DIW (36/1991) : Allgemeine Lohnsubventionen – kein Ausweg aus der Beschäftigungskrise in Ostdeutschland, DIW-Wochenbericht No. 36/1991, Berlin.
- DIW (32/1991) : Die Vereinigung wirkt positiv auf die Weltwirtschaft, DIW-Wochenbericht Nr. 32/1991, Berlin.
- DIW (1-2/1992) : Bundesrepublik Deutschland: Vor der Rezession ?, DIW-Wochenbericht No. 1-2/1992, Berlin.

- DIW (3/1992) : Pendler und Migranten - Zur Arbeitskräftemobilität in Ostdeutschland, DIW-Wochenbericht No. 3/1992, Berlin.
- Fels, G./Schnabel, C. (1991) : The Economic Transformation of East Germany. Some Preliminary Lessons, Group of Thirty Occasional Paper No. 36, Washington, D.C.
- Franz, W. (1991) : Employment Aspects of Economic and Monetary Union. Lessons from German Unification, University of Konstanz (unpubl. paper).
- Fuest, W./Lichtblau, K. (1991) : Finanzausgleich im vereinten Deutschland, in : Beiträge zur Wirtschafts- und Sozialpolitik, Nr. 192, Köln.
- Gebauer, W. (1990) : German Monetary Union. On Implicit Theories and European Consequences, Universität Frankfurt, Geld und Währung, Working Papers, No. 15, Frankfurt.
- Hoffmann, L. et al. (1991) : Stabilization of the External Trade Sector of East Germany, Paper presented at the I.P.I.-IASA Symposium, May 8, 1991 in Wolfsburg (unpublished paper).
- Horn, G.A./Scheremet, W./Zwiener, R. (1991) : Domestic and International Macroeconomic Effects of German Economic and Monetary Union, DIW-Discussion Papers, No. 26, Berlin.
- IFO-Institut für Wirtschaftsforschung (1988) : Subventionen. Probleme der Abgrenzung und Erfassung. Eine Gemeinschaftspublikation der an der Strukturberichterstattung beteiligten Institute, IFO-Studien zur Strukturforchung Nr. 11, München.
- IMF (1991) : The Economic Transformation of East Germany. Lessons for Eastern Europe, IMF Internal Paper, Washington, D.C.
- Institut für angewandte Wirtschaftsforschung IAW (1991), IAW-Kurzinformationen, Nr. 5, Nov. 1991, Berlin.
- Kröger, J. (1990) : Adaptation problems in the former GDR : an economic analysis, in : CEPS (ed.), German Unification in European Perspective, Brussels, p. 199-216.
- Kröger, J. (1991) : Integration problems of the East and West German Economy, in : Rivista di Politica Economica, May 1991, Building the New Europe I, pp. 181-214.
- McDonald, D./Thumann, G. (1990) : Investment Needs in East Germany, in : Lipschitz, L./McDonald, D. (eds), German Unification. Economic Issues, IMF Occasional Paper No. 75, Washington D.C., pp. 71-77.
- Masson, P.R./Meredith, G. (1990) : Domestic and International Macroeconomic Consequences of German Unification, in : Lipschitz, L./McDonald, D. (eds.), German Unification, Economic Issues, IMF Occasional Paper No. 75, Washington, D.C., pp. 93-114.

- Matthes, H. (1991) : Die Bewältigung der Folgen des Sozialismus. Herausforderungen für die deutsche Wirtschaftspolitik, in : Wirtschaftsdienst, Vol. 71, p. 609-613.
- Mayer, Th./Thumann, G. (1990) : German Democratic Republic. Background and Plans for Reform, in : Lipschitz, L./McDonald, D. (eds.) German Unification. Economic Issues, IMF Occasional Paper No. 75, Washington, D.C., pp. 49-70.
- Mayer, Th. (1990) : Immigration into West Germany. Historical Perspectives and Policy Implications, in : Lipschitz, L./McDonald, D. (eds.) : German Unification, Economic Issues, IMF Occasional Paper, No. 75, Washington, D.C., pp. 130-136.
- Morgan Guaranty (1991) : East Germany's Integration with the West, in J.P. Morgan (ed.) : World Financial Markets, Sept./Oct. 1991, New York.
- Neumann, M. (1991) : German Unification. Economic Problems and consequences, CEPR Discussion Paper Series No. 584, London.
- Nölling, W. (1992) : Geld und deutsche Währung, in : Deutsche Bundesbank (ed.), Auszüge aus Presseartikeln, No. 7/1992, Frankfurt.
- OECD (1990) : Economic Surveys. Germany 1989/1990, Paris.
- OECD (1991) : Economic Surveys. Germany 1990/1991, Paris.
- Pohl, R. (1990) : Altschulden der DDR-Betriebe : Streichung unumgänglich, in : DIW-Wochenbericht Nr. 36/1990, Berlin.
- Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (1990) : Brief des Sachverständigenrats vom 9. Februar 1990 an den Bundeskanzler "Zur Frage einer Währungsunion zwischen der Bundesrepublik Deutschland und der DDR", reprinted in : Sachverständigenrat (1990b), pp. 306-308.
- Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (1990a) : Zur Unterstützung der Wirtschaftsreform in der DDR : Voraussetzungen und Möglichkeiten. Sondergutachten vom 20. Januar 1990, reprinted in : Sachverständigenrat (1990b), pp. 276-305.
- Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (1990b) : Auf dem Wege zur wirtschaftlichen Einheit Deutschlands. Jahresgutachten 1990/91, Stuttgart.
- Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (1991) : Die wirtschaftliche Integration in Deutschland. Perspektiven-Wege-Risiken. Jahresgutachten 1991/92, Stuttgart.
- Schmidt, H. (1992) : Ein Pakt für die Einheit, in : Die Zeit, 14. Febr. 1992.
- Siebert, H. (1990) : The Economic Integration of East Germany, in : Institut für Weltwirtschaft (ed.) Kiel Discussion Paper No. 160, Kiel.

- Siebert, H. (1991) : German Unification. The Economics of Transition,
In : Economic Policy, European Forum, No. 13, October 1991, p. 287-
340.
- Siebert, H. (1991) : The New Economic Landscape in Europe, Oxford and
Cambridge.
- Sinn, G./Sinn, H.-W. (1991) : Kaltstart. Volkswirtschaftliche Aspekte der
deutschen Vereinigung, Tübingen.
- Tietmeyer, H. (1992) : Die deutsche Vereinigung und die D-Mark, Vortrag
anlässlich des Neujahrsempfangs der Industrie- und Handelskammer in
Berlin, in : Deutsche Bundesbank (ed.), Auszüge aus Presseartikeln,
No. 4/1992, Frankfurt.
- Wyplosz, Ch. (1991) : A Note on the Real Exchange Rate Effect of German
Unification, CEPR-Discussion Paper No. 527, London.

Economic Papers

The following papers have been issued. Copies may be obtained by applying to the address mentioned on the inside front cover.

- No. 1 EEC-DG II inflationary expectations. Survey based inflationary expectations for the EEC countries, by F. Papadia and V. Basano (May 1981).
- No. 3 A review of the informal economy in the European Community, by Adrian Smith (July 1981).
- No. 4 Problems of interdependence in a multipolar world, by Tommaso Padoa-Schioppa (August 1981).
- No. 5 European Dimensions in the Adjustment Problems, by Michael Emerson (August 1981).
- No. 6 The bilateral trade linkages of the Eurolink Model : An analysis of foreign trade and competitiveness, by P. Ranuzzi (January 1982).
- No. 7 United Kingdom, Medium term economic trends and problems, by D. Adams, S. Gillespie, M. Green and H. Wortmann (February 1982).
- No. 8 Où en est la théorie macroéconomique, par E. Malinvaud (juin 1982).
- No. 9 Marginal Employment Subsidies : An Effective Policy to Generate Employment, by Carl Chiarella and Alfred Steinherr (November 1982).
- No. 10 The Great Depression : A Repeat in the 1980s ?, by Alfred Steinherr (November 1982).
- No. 11 Evolution et problèmes structurels de l'économie néerlandaise, par D.C. Breedveld, C. Depoortere, A. Finetti, Dr. J.M.G. Pieters et C. Vanbelle (mars 1983).
- No. 12 Macroeconomic prospects and policies for the European Community, by Giorgio Basevi, Olivier Blanchard, Willem Buiter, Rudiger Dornbusch, and Richard Layard (April 1983).
- No. 13 The supply of output equations in the EC-countries and the use of the survey-based inflationary expectations, by Paul De Grauwe and Mustapha Nabli (May 1983).
- No. 14 Structural trends of financial systems and capital accumulation : France, Germany, Italy, by G. Nardozi (May 1983).
- No. 15 Monetary assets and inflation induced distortions of the national accounts - conceptual issues and correction of sectoral income flows in 5 EEC countries, by Alex Cukierman and Jorgen Mortensen (May 1983).
- No. 16 Federal Republic of Germany. Medium-term economic trends and problems, by F. Allgayer, S. Gillespie, M. Green and H. Wortmann (June 1983).
- No. 17 The employment miracle in the US and stagnation employment in the EC, by M. Wegner (July 1983).
- No. 18 Productive Performance in West German Manufacturing Industry 1970-1980; A Farrell Frontier Characterisation, by D. Todd (August 1983).
- No. 19 Central-Bank Policy and the Financing of Government Budget Deficits : A Cross-Country Comparison, by G. Demopoulos, G. Katsimbris and S. Miller (September 1983).
- No. 20 Monetary assets and inflation induced distortions of the national accounts. The case of Belgium, by Ken Lennan (October 1983).
- No. 21 Actifs financiers et distortions des flux sectoriels dues à l'inflation : le cas de la France, par J.-P. Baché (octobre 1983).
- No. 22 Approche pragmatique pour une politique de plein emploi : les subventions à la création d'emplois, par A. Steinherr et B. Van Haeperen (octobre 1983).
- No. 23 Income Distribution and Employment in the European Communities 1960-1982, by A. Steinherr (December 1983).
- No. 24 U.S. Deficits, the dollar and Europe, by O. Blanchard and R. Dornbusch (December 1983).
- No. 25 Monetary Assets and inflation induced distortions of the national accounts. The case of the Federal Republic of Germany, by H. Wittelsberger (January 1984).

- No. 26 **Actifs financiers et distorsions des flux sectoriels dues à l'inflation : le cas de l'Italie**, par A. Reati (janvier 1984).
- No. 27 **Evolution et problèmes structurels de l'économie italienne**, par Q. Ciardelli, F. Colasanti et X. Lannes (janvier 1984).
- No. 28 **International Co-operation in Macro-economic Policies**, by J.E. Meade (February 1984).
- No. 29 **The Growth of Public Expenditure in the EEC Countries 1960-1981 : Some Reflections**, by Douglas Todd (December 1983)
- No. 30 **The integration of EEC qualitative consumer survey results in econometric modelling : an application to the consumption function**, by Peter Praet (February 1984).
- No. 31 **Report of the CEPS Macroeconomic Policy Group. EUROPE : The case for unsustainable growth**, by R. Layard, G. Basevi, O. Blanchard, W. Buiter and R. Dornbusch (April 1984).
- No. 32 **Total Factor Productivity Growth and the Productivity Slowdown in the West German Industrial Sector, 1970-1981**, by Douglas Todd (April 1984).
- No. 33 **An analytical Formulation and Evaluation of the Existing Structure of Legal Reserve Requirements of the Greek Economy : An Uncommon Case**, by G. Demopoulos (June 1984).
- No. 34 **Factor Productivity Growth in Four EEC Countries, 1960-1981**, by Douglas Todd (October 1984).
- No. 35 **Rate of profit, business cycles and capital accumulation in U.K. industry, 1959-1981**, by Angelo Reati (November 1984).
- No. 36 **Report of the CEPS Macroeconomic Policy Group. Employment and Growth in Europe : A Two-Handed Approach** by P. Blanchard, R. Dornbusch, J. Drèze, H. Giersch, R. Layard and M. Monti (June 1985).
- No. 37 **Schemas for the construction of an "auxiliary econometric model" for the social security system**, by A. Coppini and G. Laina (June 1985).
- No. 38 **Seasonal and Cyclical Variations in Relationship among Expectations, Plans and Realizations in Business Test Surveys** . by H. König and M. Nerlove (July 1985).
- No. 39 **Analysis of the stabilisation mechanisms of macroeconomic models : a comparison of the Eurolink models** by A. Bucher and V. Rossi (July 1985).
- No. 40 **Rate of profit, business cycles and capital accumulation in West German industry, 1960-1981**, by A. Reati (July 1985).
- No. 41 **Inflation induced redistributions via monetary assets in five European countries : 1974-1982**, by A. Cukierman, K. Lennan and F. Papadia (September 1985).
- No. 42 **Work Sharing : Why ? How ? How not ...**, by Jacques H. Drèze (December 1985).
- No. 43 **Toward Understanding Major Fluctuations of the Dollar** by P. Armington (January 1986).
- No. 44 **Predictive value of firms' manpower expectations and policy implications**, by G. Nerb (March 1986).
- No. 45 **Le taux de profit et ses composantes dans l'industrie française de 1959 à 1981**, par Angelo Reati (Mars 1986).
- No. 46 **Forecasting aggregate demand components with opinions surveys in the four main EC-Countries - Experience with the BUSY model** , by M. Biart and P. Praet (May 1986).
- No. 47 **Report of CEPS Macroeconomic Policy Group : Reducing Unemployment in Europe : The Role of Capital Formation**, by F. Modigliani, M. Monti, J. Drèze, H. Giersch and R. Layard (July 1986).
- No. 48 **Evolution et problèmes structurels de l'économie française**, par X. Lannes, B. Philippe et P. Lenain (août 1986).
- No. 49 **Long run implications of the increase in taxation and public debt for employment and economic growth in Europe** by G. Tullio (August 1986).
- No. 50 **Consumers Expectations and Aggregate Personal Savings** by Daniel Weiserbs and Peter Simmons (November 1986).
- No. 51 **Do after tax interest affect private consumption and savings ? Empirical evidence for 8 industrial countries : 1970-1983** by G. Tullio and Fr. Contesso (December 1986).
- No. 52 **Validity and limits of applied exchange rate models : a brief survey of some recent contributions** by G. Tullio (December 1986).

- No. 53 **Monetary and Exchange Rate Policies for International Financial Stability : a Proposal by Ronald I. McKinnon (November 1986).**
- No. 54 **Internal and External Liberalisation for Faster Growth by Herbert Giersch (February 1987).**
- No. 55 **Regulation or Deregulation of the Labour Market : Policy Regimes for the Recruitment and Dismissal of Employees in the Industrialised Countries by Michael Emerson (June 1987).**
- No. 56 **Causes of the development of the private ECU and the behaviour of its interest rates : October 1982 - September 1985 by G. Tullio and Fr. Contesso (July 1987).**
- No. 57 **Capital/Labour substitution and its impact on employment by Fabienne Ilzkovitz (September 1987).**
- No. 58 **The Determinants of the German Official Discount Rate and of Liquidity Ratios during the classical gold standard : 1876-1913 by Andrea Sommariva and Giuseppe Tullio (September 1987).**
- No. 59 **Profitability, real interest rates and fiscal crowding out in the OECD area 1960-1985 (An examination of the crowding out hypothesis within a portfolio model) by Jorgen Mortensen (October 1987).**
- No. 60 **The two-handed growth strategy for Europe : Autonomy through flexible cooperation by J. Drèze, Ch. Wyplosz, Ch. Bean, Fr. Giavazzi and H. Giersch (October 1987).**
- No. 61 **Collusive Behaviour, R & D, and European Policy by Alexis Jacquemin (November 1987).**
- No. 62 **Inflation adjusted government budget deficits and their impact on the business cycle : empirical evidence for 8 industrial countries by G. Tullio (November 1987).**
- No. 63 **Monetary Policy Coordination Within the EMS : Is There a Rule ? by M. Russo and G. Tullio (April 1988).**
- No. 64 **Le Découplage de la Finance et de l'Economie - Contribution à l'Evaluation des Enjeux Européens dans la Révolution du Système Financier International par J.-Y. Haberer (Mai 1988).**
- No. 65 **The completion of the internal market : results of macroeconomic model simulations by M. Catinat, E. Donni and A. Italianer (September 1988).**
- No. 66 **Europe after the crash : economic policy in an era of adjustment by Charles Bean (September 1988).**
- No. 67 **A Survey of the Economies of Scale by Cliff Pratten (October 1988).**
- No. 68 **Economies of Scale and Intra-Community trade by Joachim Schwalbach (October 1988).**
- No. 69 **Economies of Scale and the Integration of the European Economy : the Case of Italy by Rodolfo Helg and Pippo Ranci (October 1988).**
- No. 70 **The Costs of Non-Europe - An assessment based on a formal Model of Imperfect Competition and Economies of Scale by A. Smith and A. Venables (October 1988).**
- No. 71 **Competition and Innovation by P.A. Geroski (October 1988).**
- No. 72 **Commerce Intra-Branche - Performances des firmes et analyse des échanges commerciaux dans la Communauté européenne par le Centre d'Etudes Prospectives et d'Informations Internationales de Paris (octobre 1988).**
- No. 73 **Partial Equilibrium Calculations of the Impact of Internal Market Barriers in the European Community by Richard Cawley and Michael Davenport (October 1988).**
- No. 74 **The exchange-rate question in Europe by Francesco Giavazzi (January 1989).**
- No. 75 **The QUEST model (Version 1988) by Peter Bekx, Anne Bucher, Alexander Italianer, Matthias Mors (March 1989).**
- No. 76 **Europe's Prospects for the 1990s by Herbert Giersch (May 1989)**
- No. 77 **1992, Hype or Hope : A review by Alexander Italianer (February 1990)**
- No. 78 **European labour markets : a long run view (CEPS Macroeconomic Policy Group 1989 Annual Report) by J.-P. Danthine, Ch. Bean, P. Bernholz and E. Malinvaud (February 1990)**
- No. 79 **Country Studies - The United Kingdom by Tassos Belessiotis and Ralph Wilkinson (July 1990)**
- No. 80 **See "Länderstudien" No. 1**
- No. 81 **Country Studies - The Netherlands by Filip Keereman, Françoise Moreau and Cyriel Vanbelle (July 1990)**

- No. 82 **Country Studies - Belgium** by Johan Baras, Filip Keereman and Françoise Moreau (July 1990)
- No. 83 **Completion of the internal market : An application of Public Choice Theory** by Manfred Teutemann (August 1990)
- No. 84 **Monetary and Fiscal Rules for Public Debt Sustainability** by Marco Buti (September 1990)
- No. 85 **Are we at the beginning of a new long term expansion induced by technological change?**, by Angelo Reati (August 1991)
- No. 86 **Labour Mobility, Fiscal Solidarity and the Exchange Rate Regime: a Parable of European Union and Cohesion**, by Jorge Braga de Macedo (October 1991)
- No. 87 **The Economics of Policies to Stabilize or Reduce Greenhouse Gas Emissions: the Case of CO₂**, by Mathias Mors (October 1991)
- No. 88 **The Adequacy and Allocation of World Savings**, by Javier Santillán (December 1991)
- No. 89 **Microeconomics of Saving**, by Barbara Kauffmann (December 1991)
- No. 90 **Exchange Rate Policy for Eastern Europe and a Peg to the ECU**, by Michael Davenport (March 1992)
- No. 91 **The German Economy after Unification: Domestic and European Aspects**, by Jürgen Kröger and Manfred Teutemann (April 1992)

Country Studies*

See also Economic Papers No.79 (The United Kingdom), No.81 (The Netherlands) and No.82 (Belgium).

No. 1 The Federal Republic of Germany (September 1990)

No. 2 Portugal (February 1991)

No. 3 United Kingdom (March 1991)

No. 4 Denmark (April 1991)

No. 5 France (août 1991)

No. 6 Ireland (September 1991)

No. 7 Spain (March 1992)

* Country studies are the result of internal analysis of the economic situation of the respective member country; they are made on the responsibility of the Directorate-General for Economic and Financial Affairs of the Commission of the European Communities.