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## Reunification, restructuring, recessions and reforms: the German economy over the last two decades

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Bayerische Julius-Maximilians-Universität Würzburg

Wirtschaftswissenschaftliche Fakultät

**Reunification, Restructuring, Recessions and  
Reforms – The German Economy over the  
Last Two Decades**

**Michael Grömling**

Wirtschaftswissenschaftliche Beiträge  
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**Reunification, Restructuring, Recessions and Reforms –  
The German Economy over the Last Two Decades**

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## **1. Germany's deteriorating welfare position**

After the longest period of economic stagnation in the last six decades Germany started to recover in 2004. Compared to the poor performance in the preceding years, 2006 and 2007 were marked by extraordinary economic growth. Real gross domestic product (GDP) as a measure of economic activity increased by 2.7 per cent on average. An end of the present economic upturn is not in sight in spite of higher risks. In spring 2008 almost all economic forecasts for Germany expected an ongoing economic expansion in 2008 and in 2009. However, high energy prices, the appreciation of the Euro and the gradual impacts of the U.S. financial and real estate turbulence are expected to slow the German economy.

In terms of economic growth Germany has successfully closed ranks with the average performance of the other members of the European Monetary Union (EMU) in 2006 and 2007 (figure 1). Between 1995 and 2005 the German economy had on average grown by one percentage point less than the average of the other EMU-countries. Germany and Italy had been the tail lights since the mid-1990s. As a result of this poor growth performance Germany has missed the chance of further income improvements. Economic growth is not pursued merely for its own sake, it more or less determines per capita income growth and, hence, material welfare of a society. An international income comparison shows the relative income loss of Germany's residents (table 1). In 1991, Germany ranked eleventh among the 20 economies surveyed in table 1. Per capita GDP – adjusted for purchasing power differences – reached almost 19,000 US-dollar. In comparison, Ireland with a per capita income of around 14,500 US-dollar ranked second to last. In 2007 Germany ranked sixteenth while Ireland had advanced to the fourth place from top. The poor income performance of Germany reflects the poor growth performance during those years.

However, since 2004 Germany's situation bears a strong resemblance to the situation at the end of the 1980s in West Germany. On the eve of reunification there was a pronounced acceleration of economic growth in West Germany. Employment expanded and the number of unemployed decreased. Against this background the following analysis describes the economic development in West and East Germany since the end of the 1980s. This period between the end of the 1980s and the

economic situation in 2008 can be distinguished into four sub-periods – although this categorisation should not be regarded as a clear cut definition:

1. The reunification boom and bust (1990 to 1996).
2. The new economy boom (1997 to 2000).
3. The long stagnation (2001 to 2004).
4. The little-noticed recovery (2005 to 2008)

This article starts with a short description of the economic performance of West and East Germany in the 1980s. This is helpful in order to understand some of the restructurings in the 1990s. Several figures and tables (see appendix at the end of the article) depict the empirical background of the following analysis. In order to draw a comprehensive picture, the data mostly covers the entire 1980s. Most of the time series end with the year 2007.

## **2. The economic situation in Germany in the 1980s**

### **“Little economic miracle” in West Germany**

Real GDP grew in West Germany by 3.8 per cent per year on average in 1988 and 1989. This was considerably above the moderate growth rates in the preceding period (figure 2). Total employment increased by 1.7 per cent per year in 1988 and 1989 and the number of unemployed fell from 2.23 million in 1987 to 2.04 million in 1989. As in 2007 the government budget was balanced in 1989 (figure 3) and the export surplus was an engine for growth (figure 4).

The present economic situation and the one at the end of the 1980s have a preceding slack period in common. At least three reasons can explain the dull growth and investment performance in the 1980s (Giersch/Paqué/Schmieding, 1992, 272; Carlin, 1996, 473; Schröter, 2000, 383; Eichengreen, 2007, 252). Firstly, the negative oil price shocks in the mid 1970s and the early 1980s, the exorbitant wage increases and the high real interest rates worsened the cost situation and the capital returns significantly. This hampered investment and Germany’s growth potential. Secondly, emerging market economies built up pressure on traditional manufacturing branches

and the appreciation of the Deutschmark against other currencies (table 2) tightened competition. Thirdly, there was an institutional deterioration: an increasingly rigid labour market, regulations and bureaucracy inhibited the flexibility of firms to adjust to external challenges. In total, these developments contributed to a variety of structural problems which finally resulted in rising unemployment (figure 5).

The second half of the 1980s saw a gradual recovery which unfolded in the boom at the end of the decade. On the 40<sup>th</sup> anniversary of the Deutschmark in 1988 West Germany enjoyed a “little economic miracle” (Weimer, 1998, 351) triggered by an improvement of supply side conditions which resulted from declining energy and raw material prices and moderate wage policies. Germany’s unit labour cost position improved. In addition, the tax reforms of 1986, 1988 and 1990 enhanced labour incentives and the investment climate. Better locational conditions stimulated investment considerably. Not least the internal market project of the European Union had revived the political and economic landscape (Donges, 2008). The recession of the early 1980s and the fear of an “eurosclerosis” built up pressure to reinforce European integration. In 1985 the member states of the EU decided to complete the internal market. All barriers to the free movement of goods and services, capital and persons were to be abolished by the end of 1992. The goal of the Single European Act, which came into effect on July 1<sup>st</sup> 1987, was the gradual accomplishment of an economic and monetary union in Europe. This improved the economic climate at the end of the 1980s.

### **Economic Collapse in East Germany**

In contrast to the West German economy the situation in the former German Democratic Republic (GDR) had gradually deteriorated. The period from the early 1980s to 1989 was once described as a “veiled economic collapse and government bankruptcy” (Lehmann, 2002, 349). The accompanying lack of future prospects for increasing numbers of the East German population had led to a growing demand for exit permits and, in the summer of 1989, to a stampede across other East European countries and Austria to West Germany. Furthermore in autumn 1989 mass demonstrations took place in East German cities.

The structural deficits of the East German economy, particularly those in the 1980s can be explained by at least four factors (Giersch/Paqué/Schmieding, 1992, 258; Ritschl, 1996; Schröter, 2000, 402; Eichengreen, 2007, 296; Buch/Toubal, 2007; Plickert, 2008):

- Pronounced supply gaps and scarcity as a result of centralised decision making and the command economy were omnipresent. Most of the economic activities were organised in huge conglomerates (“Kombinate”). Rigid plans guided the allocation of inputs and the distribution of outputs and caused permanent bottlenecks. Consumption goods and inputs for firms were not available in sufficient quantities. The government controlled and fixed prices did not deliver reliable information about the scarcity of goods. Furthermore prices did not help to use resources efficiently.
- At the end of the 1980s the capital stock in the GDR was more or less obsolete. In the absence of private ownership or the control of capital markets the managers of the firms did not have any strong incentive to keep the capital stock intact. The lack of modernisation was accompanied by slow technological change compared to West Europe or the US. The centralisation of investment decisions led to a concentration on a few large-scale and obvious prestige projects. Furthermore, the ecological situation suffered from the modernisation and technological backlog.
- The production process in East Germany can be characterised by a relatively low division of labour. In the huge conglomerates a high degree of self-production of inputs dominated – so that the economy forfeited the benefits of an inter-firm and inter-sectoral division of labour on the basis of comparative advantages. The management of the firms was expected to reach the fixed targets and fulfil the government plan. As firms could not go bankrupt, they had few incentives to improve their efficiency. In addition, the division of labour within the Council for Mutual Economic Assistance – an economic cooperation among East European countries – was determined by political and not by economic criteria.

- As in most socialist economies the service sector – in particular banks, insurance companies and the wholesale and retail sector – was underdeveloped. By the end of the 1980s East Germany's industry- and agriculture-based economy lagged far behind the developed economies in the Western world.

As a result of these deficiencies per capita production in East Germany amounted only to 56 per cent of the West German level at the end of the 1980s (Heske, 2005, 70). In 2007, the gap was still remarkable, but had diminished to one third of the West German level (figure 6).

### **3. Reunification boom and bust (1990 to 1996)**

The peaceful revolution in East Germany in 1989 was the starting point for Germany's political and economic reunification. On November 9<sup>th</sup> 1989 the Berlin Wall toppled. The following migration from East to West and the growing expectations of those who stayed in East Germany made a gradual economic reunification almost impossible. The roadmap was dictated by the fear of an economic breakdown and political instabilities. When the situation became more unstable in early 1990 a swift economic, monetary and social union was agreed on which made the reunification irreversible (Sinn/Sinn, 1991, 11; Giersch/Paqué/ Schmieding, 1992, 261). On July 1<sup>st</sup> 1990, the Deutschmark was introduced as the sole legal tender and the West German economic order has come into effect. As a symbol of West Germany's social market economy, democracy and wealth the Deutschmark was supposed to become the symbol of reunification (Weimer, 1998, 367). The political reunification followed on October 3<sup>rd</sup> 1990.

#### **Increasing adjustment burdens in East Germany**

The economic, monetary and social union which started on July 1<sup>st</sup> 1990, has substantially impacted the East German economy. On the one hand, it made clear that the system change was credible and irreversible. In contrast to other countries in transition East Germany adopted the institutional infrastructure long established in West Germany. East German communities benefited from West German creditworthiness, which relieved their financial burdens. Furthermore, firms and



communities in East Germany received unrestricted access to the world capital markets. On the other hand, reunification brought all the complexities and deficiencies of the West German institutions to the East (Giersch/Paqué/Schmieding, 1992, 268).

As part of the monetary union most financial assets and liabilities were converted at a rate of 2 Eastmarks to 1 Deutschmark. Recurrent payments – e. g. rents and wages – were converted at a rate of 1 to 1. As a result East German products lost much of their competitiveness (Sinn/Sinn, 1991, 34). For firms in the East this meant a huge labour cost shock. Saddled with an outdated capital stock the bulk of the manufacturing capacities became obsolete. Goods which had been highly subsidised before had hardly any chance to survive under these conditions. The huge conglomerates were not able to keep up with their competitors from the West. In addition, preferences of the East Germans shifted from East German products to often cheaper and superior goods from the West. The huge demand push in West Germany thus went hand in hand with strongly subdued demand for East German products. In retrospect it is no surprise that particularly the manufacturing sector and its employees had to bear the brunt in the initial stage of reunification.

A new fiscal transfer system was established in order to cushion the gradually surfacing and growing structural and financial burdens in East Germany (Lichtblau, 1995). From 1991 to 2003 the total gross transfer volume amounted to 1,200 billion Euro. Of course, one goal of this system was to promote the acceptance of reunification and to guarantee social peace and economic stability. As a result of the transfers the improvements in the living standard were increasingly decoupled from the partial collapse of the economy. Against this background there was growing concern that East Germany would become a “transfer economy” or a “German Mezzogiorno” (Sinn, 2002). Also convergence between wages in East and West was formulated as a political goal. In economic terms this meant that the competitiveness of East German firms would further deteriorate while productivity in the East lagged far behind the Western level (Grömling/Schnabel, 1998; Sinn, 2002; Burda, 2006).

The economic flaws of the reunification – e. g. the monetary conversion of wages at a rate of 1 to 1, the wage convergence between East and West, the imposition of West Germany’s rigid labour market institutions – created a considerable need to

restructure the supply side of the East German economy. But it should not be forgotten that the East German manufacturing sector stabilised quickly – albeit at a low level. Figure 7 shows East German manufacturing performance as a percentage of total German manufacturing value added from 1991 to 2007. The decline of the East German share already stopped in 1992. Afterwards the share steadily increased. This gain in significance of the East was also the result of a de-industrialisation in the West. In addition, the reconstruction process in East Germany triggered an immense construction boom as the modernisation backlog created a huge demand for infrastructure investment – new roads and public utilities (e. g. waterworks, purification plants) –, new commercial areas and residential construction.

### **Reunification boom in West Germany and an ailing world economy**

In economic terms the reunification stimulated the West German economy. West Germany boomed in the early 1990s while some other economies such as the United States and the United Kingdom were hit by a recession. In 1990 and 1991 real GDP grew by more than 5 per cent annually in Germany. This was considerably more than during the preceding decade (figure 2). The number of unemployed people diminished in West Germany from 2 to 1.7 million in 1991. High migration to West Germany triggered a construction boom. In addition the reconstruction process in East Germany animated suppliers in the West. After a long time Germany also realised a current account deficit (table 3):

- The traditional surplus in international merchandise trade diminished from more than 70 billion Euro in 1989 to a mere 16 billion Euro in 1991. Some of the goods earmarked for export were re-directed to East Germany. Moreover, the ailing world economy slowed down exports while imports increased in order to satisfy the additional demand in East Germany.
- The growing current account deficit also resulted from an increasing deficit in international service trade – particularly in connection with expanding tourism. In addition, current transfers led to a growing deficit due to higher payments to the EU and payments to Russia because of the troop withdrawals and due to sharing the financial burden of the Gulf war with the U.S.
- The reverse side of the current account deficit was a capital account surplus. Increasing capital imports were necessary to cope with the financial burdens of reunification. The net capital imports were not used for foreign direct investment in

Germany but to finance the emerging public deficit, so that reunification caused a twin deficit – a current account and a government deficit.

The euphoria which accompanied reunification and the world championship in soccer in 1990 raised expectations that Germany would become an engine of growth in Europe for a long time. However, the reunification boom lasted only for a while.

### **A sudden end to the reunification boom in West Germany**

The foundations of large scale restructuring in West Germany had been laid in the early 1990s. The reunification era started with an economic boom in the West and a concurrent contraction in the East. In 1993, however, the West German economy slipped into a severe recession with real GDP declining by 2.2 percent. East German GDP was still growing due to the construction boom and the transfer-driven private and public consumption. It expanded by 12.6 per cent in real terms in 1993. Unemployment had already increased in West Germany in 1992 and in 1993 it amounted to 2.27 million people – 580,000 more than during the 1991 trough. Figure 5 shows that unemployment continued to increase up to 1997, when more than 3 million people were registered unemployed. The following arguments can explain the sudden death of the reunification boom:

- It has already been mentioned that the balance of payments changed abruptly with reunification. The West German export business weakened because of the re-direction of goods from West to East Germany and because of the slackening global demand.
- The competitiveness of the German economy suffered from the development of wages and non-wage labour costs (Berthold, 1992; Donges, 2008; Peter, 2008). The latter were driven by rising social security contributions after the introduction of the West German social security system in the East (social union).
- The Deutschmark appreciated substantially in the wake of the crisis of the European Monetary System (EMS) in 1992 (Eichengreen, 2007, 357). Exchange rates within Europe and against major non-European currencies had been relatively stable up to this time. However, the internal stability of the EMS came under pressure when the Maastricht treaty was rejected by Denmark and other countries started to doubt the wisdom of the EMU. Large price and productivity differences among the EMS member states and increasing interest rates in Germany due to rising inflation (figure 8) caused speculative attacks on EMS currencies that were thought to be overvalued.

All of these developments finally led to the appreciation of the Deutschmark against some EMS currencies (table 2).

The West German manufacturing sector, in particular, experienced increasing pressure in 1993. The manufacturing share in total value added decreased from 29 per cent in 1991 to 25.5 per cent in 1993. Figure 9 shows that the de-industrialisation in West Germany – in contrast to East Germany – continued until the mid-1990s. In 1996, only 24.1 per cent of GDP originated from manufacturing firms – 5 percentage points less than 1991. There was only a short recovery in 1994 before the West German economy again lost momentum in 1995 and 1996. Instabilities in Latin America (“Tequilla crisis in Mexico”) and ongoing structural problems in Japan triggered another wave of appreciation of the Deutschmark (table 2). In addition, the cost situation of firms deteriorated as a result of tax increases (solidarity surcharge) and rising social security contributions (introduction of the long-term care insurance). Furthermore, there were high wage settlements in certain industries in 1995 and the construction boom abated. All in all, the reunification boom, which was supposed to be a long-run stimulus for the German economy, ended in the mid-1990s. The number of unemployed had already begun to increase in 1992.

#### **4. Restructuring and the New Economy boom (1997 to 2000)**

The period 1997 to 2000 was also an eventful time for Germany – although macroeconomic indicators show a stable and upward sloping development. In retrospect, the crises in Asia and Russia in 1997 had no strong adverse effect on the German economy. After 16 years in power the government coalition of CDU, CSU and FDP was replaced by a coalition of SPD and Bündnis 90/Die Grünen in autumn 1998 which started with an unclear course.

The second part of the 1990s can be characterised as the high time of business restructuring in Germany. Huge adjustment burdens from the early 1990s – increasing labour costs, appreciation of the Deutschmark, the deterioration of supply side conditions due to higher taxes and non-wage labour costs as well as increasing international competition from emerging and transformation countries led to a

fundamental reorganisation and modernisation of the production process. In view of the accumulated cost handicaps – figure 10 shows the deterioration of German unit labour costs in comparison with other industrialised countries – cost-cutting programmes often prevailed. Downsizing and lean production were popular. German firms have pursued two different strategies to modernise their product range and particularly their production processes (Grömling, 2008):

- First, the intensification of the inter-sectoral division of labour. Industrial firms are now offering services alongside with their products without necessarily producing the individual components themselves. Parallel to expanding their services manufacturing firms concentrated on core production activities and outsourced certain services to specialist companies. This shift from producing one's own goods or services toward buying product components on the market has grown popular for many reasons: companies consider factors such as the availability of knowledge and skills, differences in quality and cost, the flexibility of fixed costs and production bottlenecks before they decide in favour of “making or buying” specific components. Figure 11 shows an increasing inter-sectoral division of labour in manufacturing during the 1990s. In 2006, intermediate inputs from other sectors made up around 68 per cent of the manufacturing sector's gross output, up from just 62 per cent in 1991. However, there is a marked difference between the 1990s and the ensuing period. The intermediate inputs ratio calculated on the basis of nominal values increased by 4½ percentage points between 1991 (62 percent) and 2000 with the biggest increase in the second half of the 1990s. In recent years, however, there has been a more or less pronounced sideways movement of the intermediate inputs share. The fact that it is rising again now is not a result of outsourcing, but one of rising prices of energy and raw materials.

- Second, the expansion of the international division of labour. An increasing share of imported intermediate inputs empirically supports this development. Some former domestic production has been shifted to subsidiaries or foreign firms abroad. Input-output tables can be used as empirical evidence for this cross-border outsourcing or offshoring trends (Grömling, 2007b). According to these calculations 30 per cent of manufacturing production in Germany originated in 2003 from the firms' own value added – which corresponds to an intermediate input share of 70 per cent (figure 12).

In 2003 imported intermediate inputs accounted for 18 per cent of manufacturing production. In comparison with the manufacturing structure in 2000 (which is directly comparable with that of 2003) imported inputs had lost some importance. In contrast, during the 1990s the share of manufacturing firms' own value added shrunk by 5 percentage points to 32 percent. This was also the case for inputs from other manufacturing firms. In return the shares of service inputs and imported inputs significantly increased. The most important structural changes occurred in the second half of the 1990s, when economic integration with the Eastern Europe countries actually took place.

These developments are reflected in ups and downs of the German labour market. In 1997 the average number of unemployed people for the first time surpassed the threshold of 3 million. Job creation in the service sector was by far not enough to compensate for job losses in manufacturing. Also in East Germany the number of unemployed peaked at 1.7 million. This was followed by a pronounced recovery. By 2000 the number of registered unemployed had declined to 2.5 million in West Germany. In East Germany unemployment remained high but stable until 2001. From 1997 to 2001 the number of employees increased in total by 1.85 million people in Germany.

The decline in unemployment and the concurrent job creation can be explained by the launch of moderate wage policies. From 1991 to 1996 labour costs per hour worked increased on average by 5 per cent per year. During the following decade this was 1.6 per cent per year. As figure 10 shows, unit labour costs were stable over the second half of the 1990s. Wages and productivity increased at the same pace. In contrast, the other countries' aggregate faced a pronounced increase. The widening cost gap of the early 1990s was finally closed again at the end of the decade.

The labour market improvement was also promoted by a favourable macroeconomic environment. Business investments recovered not least as a result of improving profits. The 1990s were also characterised by very low oil and raw material prices. The price per barrel crude oil was mostly below 20 US-dollar in the 1990s – in 1998 it even dropped below 13 US-dollar on average (figure 13). Furthermore, the Deutschmark was not appreciated against other currencies during the second half of

the 1990s. The introduction of the Euro at the start of 1999 had ameliorated Germany's export position because the common currency for the initial eleven countries continued to lose value until 2002 (figure 14).

The introduction of the Euro also coined the period 1997 to 2000. Although the cash changeover occurred on January 1<sup>st</sup> 2002, the year 1999 marked the actual start of the EMU – characterised by irrevocably fixed exchange rates and the responsibility of the European Central Bank (ECB) for monetary policy in the Euro area. A long period of discussions and preparations ended, which had begun in 1989 with a blueprint for the EMU, the so-called Delors Report. The Maastricht treaty, which was the decisive step towards the EMU, was signed in 1992. It defined convergence criteria which member states would have to satisfy generally before participating in the EMU, e. g. limits for government deficit and government debt, price stability and interest rate stability. This started a convergence process, which resulted in significantly lower interest rates in the participating countries.

In addition to declining interest rates a remarkable stock market boom in the wake of the so-called new economy enhanced the macroeconomic environment. New economy can be interpreted as the various effects of modern information and communication technologies (ICT) on the macroeconomic development – e. g. the accelerated growth of labour productivity due to modern ICT. It became possible and easier to optimise production processes and to establish international production networks by making use of ICT. Not least because of these modern technologies the bulk of firm restructurings took place during the ICT boom. According to model calculations for the US economy, half of the productivity progress in the late 1990s was due to modern ICT (CEA, 2001, p. 28). However, these innovations also caused an upswing in investment. And in addition the stock market was stimulated by ICT products and ICT firms. It is possible that the investment behaviour of private households also changed substantially during this time – e. g. the number of private shareholder surged. Finally the stock market development was more dynamic in Germany than in the United States (figure 15). The stock market rally substantially improved corporate financing conditions and the increasing wealth of private households contributed to a marked recovery of private consumption. From 1998 to 2000 real private consumption increased, on average, by 2.2 per cent per year. At the

same time, corporate investment in machinery and equipment surged by more than 10 per cent annually. Only construction investment slowed the macroeconomic development after 1995. In 2000 real construction investment was 7.5 per cent below the 1995 level. Especially non-residential construction faced a severe crash. The construction crisis was, on one hand, a result of a normalisation process in East Germany. A pronounced adjustment process set in after the fast and broad reconstruction in the early years of reunification. On the other hand, construction investment in West Germany levelled as a result of strained coffers in German municipalities and by the absence of the demographic impulses of the early 1990s.

## **5. The long stagnation (2001 to 2004)**

Despite the ongoing construction bust at the turn of the millennium there was broad confidence regarding the countries' economic prospects. Germany had been waiting for the positive effects of the new economy. In terms of economic growth, 2000 was the best year since the early 1990s. Real GDP expanded by 3.2 percent. Employment grew by 1.9 per cent or 720,000 people in 2000. Even in the first quarter of 2001 real GDP surged. As in other countries, this was followed by a pronounced deceleration. The US economy started to decline in mid-2000 and in summer 2001 it was hit by a recession – for the following reasons:

- There was an unusually strong oil price hike in 2000. Compared to the previous year the oil price rose by 10 US-dollar to an annual average of 28 US-dollar per barrel. Within two years the price per barrel crude oil had doubled.
- The new economy bubble burst. Many of the companies quoted on the American NASDAQ lost in value after March 2000. Some of them were not able to meet the exuberant expectations. Against this backdrop various ICT firms collapsed. The share market crash was deepened by accounting scandals. Figure 15 shows that the German stock market was hit more severely than the US market.
- As the situation in the United States had calmed down the terror attacks of 9/11 created a new dimension of geopolitical uncertainty.

In conclusion, the German economy suffered more than the US economy or that of other European countries. All in all, price and seasonally adjusted GDP stagnated



from spring 2001 into 2004. This marked the longest stagnation in postwar Germany. This slack economic period was accompanied by the following developments (Schumacher, 2003; Hüther, 2008):

- **Job loss:** Despite waning production employment increased even in 2001. Firms hesitated or were not able to adjust their workforce immediately, although total hours worked had already been cut back by shorter working times. In 2002 and 2003 employment fell by almost 600,000 people. Unemployment increased from 3.85 million in 2001 to an average of 4.9 million in 2005. The number of registered unemployed temporarily exceeded 5 million in 2005 mainly because of rising unemployment in West Germany (figure 5).

- **Poor consumption:** The job loss weakened the income dynamics and, therefore, private consumption (Deutsche Bundesbank, 2007a; Lesch, 2007). In addition, the initial stock market losses and increasing energy prices put a brake on consumption.

- **Investment crisis:** Gross fixed capital formation receded from 2001 to 2004. Construction investment declined year by year from 2000 into 2005. In 2005 it amounted to only 76 per cent of the peak level of 1995. But also investment in machinery and equipment, which generally responds relatively strong to business climate changes, plummeted in 2001 and 2002. A slight recovery started in 2004.

- **Export success:** At first the weaker pace of the world economy decelerated German export growth – although there had been no decline in absolute numbers. Despite the appreciation of the Euro in 2002 exports remained steady. However, the growth of real exports in 2003 by 2.5 per cent had been the slowest since the crisis of 1993. In 2004 they increased by 10 per cent and the German export motor started to roll again. Figure 4 shows that in 2001, 2002 and 2004 economic growth in Germany was exclusively determined by an export surplus.

- **End of de-industrialisation:** The output approach of GDP reveals another feature of the economic development in Germany. The year 2000 was a boom year for German manufacturing – real value added increased by almost 7 percent. Instead, 2002 saw a decline by 2 percent. However, manufacturing had not lost importance

within the German economic structure since the mid 1990s. The share of manufacturing in total value added remained constant over this period. Despite the increasing value added and the stable output share the manufacturing sector had, however, not been able to stabilise its employment level (Bachmann/Burda, 2007). Technological progress and a growing importance of private employment agencies, which are statistically attributed to the service sector, can explain these diverging sectoral trends of output and employment. An intensified inter-sectoral or international division of labour is only a limited explanation. Although the enlargement of the EU took place formally in 2004, the real effects accrued mostly in the 1990s.

The precarious economic situation after the boom in 2000 – especially in comparison to other European countries – led to a reorientation of economic policy in spring 2003. Locational conditions had worsened after the re-election of the red-green coalition in September 2002 – because of hastily enacted tax increases as well as higher contributions and assessment limits in the social security system. Despite numerous and justified caveats (Berthold/Berchem, 2005) the reforms of the so-called “Agenda 2010” did, however, launch a political turnaround in March 2003. Based on the report of the German Council of Economic Experts “Twenty proposals for employment and growth” (SVR, 2002) the labour market was in part deregulated, the public health system was partly reshuffled, unemployment assistance and social assistance were merged and the pension insurance system was somewhat rearranged.

## **6. The little noticed recovery (2004-2008)**

In 2006 and 2007 real GDP grew on average by 2.7 percent. The labour market improved significantly. Employment increased by 891,000 people from 2005 to 2007. At the end of 2007 more than 40 million persons were in employment. The number of unemployed decreased from more than 5 million in 2005 to 3.5 million at the end of 2007. As a result of growth-induced revenues and only moderate expenditures increases the government was able to end the deficit practice over the last decades (figure 2). Four factors explain this pronounced economic recovery:

**Booming world economy:** Between 2003 and 2007 global economic activities grew at an unprecedented pace. In real terms world trade expanded, on average, by almost 8 per cent per year. Several developments contributed to this boom. First, the intensified integration of Asia into the world economy. Second, the extraordinary improvement of the growth performance of countries with huge energy and raw material resources. Third, the solid catching up process which took place in Eastern European countries. All three factors allowed German firms with their manufacturing-based product portfolio to make good use of this global growth potential (Deutsche Bundesbank, 2006; Danninger/Joutz, 2007; Grömling, 2007a). These factors and the combination of high quality and highly differentiated manufactured goods, a broad range of associated services and a modern global network made possible an extraordinary export boom of German firms. No other country worldwide has been in a position to export more manufactured goods during the last couple of years. The recovery of the German economy has been driven to a large extent by exports and thus by the manufacturing sectors which account for almost 90 per cent of German foreign trade. Thus, more than half of Germany's economic growth since 2001 has resulted from export surpluses (figure 4).

**Improving competitiveness:** The German export boom, which started in the second half of the 1990s, can also be explained by a higher degree of cost discipline. While nominal labour costs per hour worked had surged by 5 per cent per year on average from 1991 to 1996, they went up by only 1.6 per cent annually during the subsequent decade. Despite this moderate increase German labour costs still exceed those of most other countries (Schröder, 2007). The same applies to its unit labour costs, which also take the productivity of the workforce into account, even though the cost disadvantage built up during the early 1990s has shrunk recently (figure 10). In contrast to Germany unit labour costs decreased in the first half of the 1990s, on average, in the 15 other countries included in figure 5 before the development reversed in the second half of the 1990s with stable unit labour costs in Germany and rising costs in the other countries. In 2003 they started to decline in Germany and simultaneously abroad, where they stabilised after 2004. The development of exchange rates also contributed to the export-driven recovery and the comeback of the German manufacturing sector (figure 14). Although the Euro has appreciated strongly against the US-Dollar since 2002, the start of the German export expansion coincided with a weak Euro between

1999 and 2002 and the fact that the former currencies of the EMU members can no longer depreciate against the German currency.

**Restructuring:** The excellent foreign position of the German manufacturing sector is, to some extent, the result of numerous restructuring processes which mostly took place in the second half of the 1990s. Manufacturing had become less important in the early 1990s. Large scale restructuring followed this de-industrialisation. In contrast, the present upswing is dominated almost exclusively by the manufacturing sector which has increasingly profited from this restructuring in recent years.

**Economic reforms:** The economic reforms initiated in 2003 can be seen as another explanation for Germany's rebounding (Deutsche Bundesbank, 2007b). The so-called "Agenda 2010" marked a political turnaround in 2003. A study by the Cologne Institute for Economic Research (Institut der deutschen Wirtschaft Köln) shows the high impact of certain factors like unemployment, business investment and taxes on economic growth (Grömling/Plünnecke/Scharnagel, 2007). According to this study the potential growth rate has been significantly higher since 2003 and the reforms have contributed one third to the acceleration of growth in Germany:

- Firms have created more jobs and the unemployment rate has fallen – which resulted in a growth effect of 0.5 percentage points. This was due to various labour market reforms, such as the relaxation of employment protection and more incentives for unemployed to seek employment because of a shorter period of entitlement for unemployment benefits (Boss et al., 2007).
- Tax reductions have improved the investment climate in Germany. Increasing business investments have contributed 0.4 percentage points to the enhanced potential growth rate.
- Government has stopped reducing its own investment and therefore has increased trend growth by 0.3 percentage points.
- Government budget policy has been more or less neutral. While the consolidation of the budget spurred growth the tax increases (e. g. higher value added tax) have hampered it.

### **Winners and losers of the latest upswing**

To the surprise of many Germany has emerged from its lethargy in economic growth terms. Despite the immense labour market improvements – in 2006 and 2007 in total 891,000 new jobs were created and the number of unemployed fell by more than a million – the opinion prevails that only a minority of the population benefits from the recovery (Hüther, 2008). Therefore, this period can be titled as the almost non-perceived or little noticed recovery. It is obviously a matter of perspectives of which at least four can be discerned:

- An economic downturn and the subsequent recovery are accompanied by structural changes. Several branches win, others lose in importance. With regard to the recent business cycle, firms in export-oriented sectors and their employees have particularly benefited. Firms and employees in manufacturing-related service branches have also improved their position. By contrast, consumption and construction related branches have remained in the shade of the upturn.
- The winners are not equally distributed across the country. Cluster-regions with powerful export firms working in collaboration with a network of suppliers have shown a significantly better labour market performance in recent years (Lichtblau/Neligan/Richter, 2005).
- With regard to income developments the better qualified should have come out best. Structural change towards modern and highly sophisticated products in combination with skill and knowledge-intensive services favours employees with the relevant qualifications. The labour market reforms have, however, also enhanced the employment opportunities and earnings capacity of low-qualified persons.
- Profits and property incomes have developed more dynamically in recent years than total compensation of employees (Grömling, 2006). Therefore, the so-called labour share in 2004 had for the first time after reunification declined below 70 per cent of national income (figure 17). In 2007 it amounted to only 65 percent. Despite slight fluctuations, compensations for labour as a percentage of national income has ranged between 70 and 72 per cent since the mid-1980s. The recent sharp decline, however, allows several explanations: the recovery of business profits, the increasing property

income of private households and the growing share of self-employed, whose labour income is statistically part of profit and property incomes. Moreover, there have been changes in the personal income distribution as a result of the structural change and the higher importance of human capital and property income. In addition, the income situation is currently tense because real incomes have more or less stagnated and moderate nominal increases have been absorbed by rising inflation in the wake of soaring energy prices and the increase in the value added tax from 16 to 19 per cent in 2007.

## 7. Future challenges

Since 2004 the German economy has been on the road of recovery. It has benefited extraordinarily from the global boom, because companies increased their competitiveness by restructuring and more efficient cost management. Politics have also contributed to the recovery by improving growth conditions (Grömling/Plünnecke/Scharnagel, 2007; Deutsche Bundesbank, 2007b). More than a third of the growth acceleration from 2003 to 2007 was based on the improved growth determinants as a result of political measures. But a once-off effort is not sufficient in order to improve the growth potential in the long run. A continuous process of further improvements is necessary. The reform dividend in the form of a higher potential growth rate and more employment has made clear that reforms pay. However, the current good economic situation has tempted politicians to refrain from further reforms. Table 1 has already shown what happens when the growth drivers of an economy lose their grip. Economic growth is not pursued for its own sake but it determines the macroeconomic income development. Reforms which stimulate economic growth render a yield in the form of more jobs and higher income.

The political orientation, therefore, will determine whether Germany will be able to cope with the following challenges in the future:

- **Structural change and globalization:** In contrast to other countries a slight re-industrialisation has taken place in Germany over the last decade (Grömling, 2007a; 2008). Manufacturing – especially in combination with product-related services – has

gained ground. The economic catching up of many emerging markets together with a growing world population raise hopes that Germany with its highly specialised industry will benefit from future global growth and trade. The quality of the locational conditions will decide whether manufacturing companies located in Germany will be able to compete successfully with their international rivals.

- **Technological change:** Germany has to bring out permanent innovations in order to exploit the global opportunities and to stabilise or even create jobs. Future wealth depends on innovations and domestic investment. One prerequisite is a modern educational system. In addition, the supply side conditions – e. g. the efficiency of the tax system and the extent of bureaucracy – will influence the number of modern companies and innovative products.

- **Demographic change:** Last but not least, the future economic development depends on the demographic trends. The German population will shrink and age over the coming decades (figure 18). On average, there will be more older people in all European countries. This must not necessarily be bad for economic growth (Grömling, 2004). A growing world population and the accompanying demand for modern goods and services might stimulate the export-oriented branches of an economy. However, this requires substantial efforts by companies, employees and the government. Firms and their employees will have to learn how to cope with a smaller and, on average, older workforce. In addition, the demographic change will have far reaching effects on the innovativeness of a society. New ways of further education and human resource management will be needed. The government must safeguard its budget and the social security system against the shrinking and aging population. Therefore an ongoing consolidation of the budget and a decoupling of social security from the labour contract are necessary.

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Figure 1: **Economic Growth in International Comparison**  
 Percentage change of real GDP from previous period  
 Source: Federal Statistical Office; OECD; own calculations

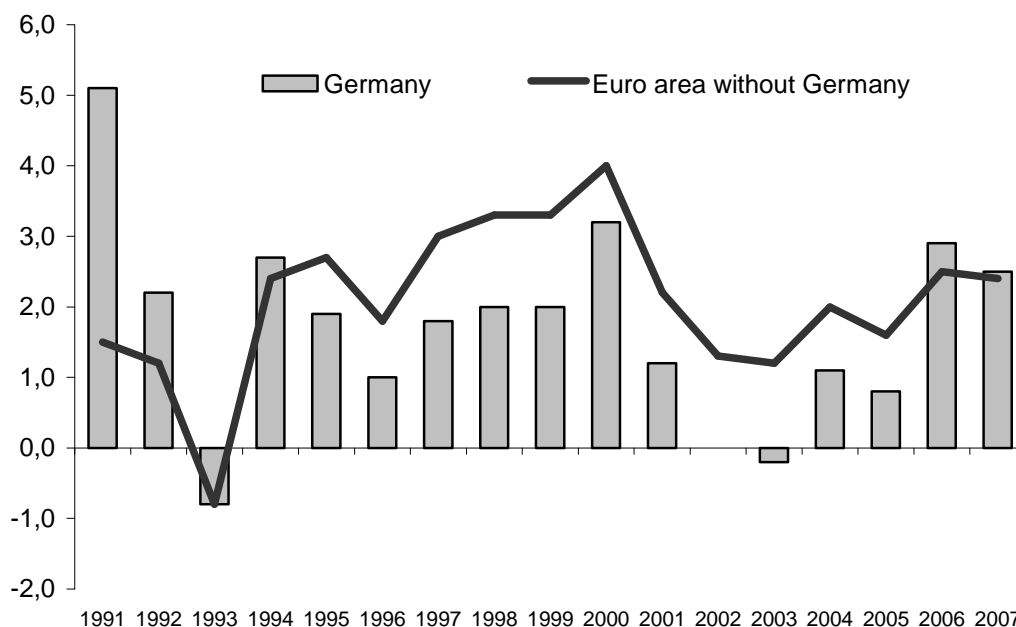
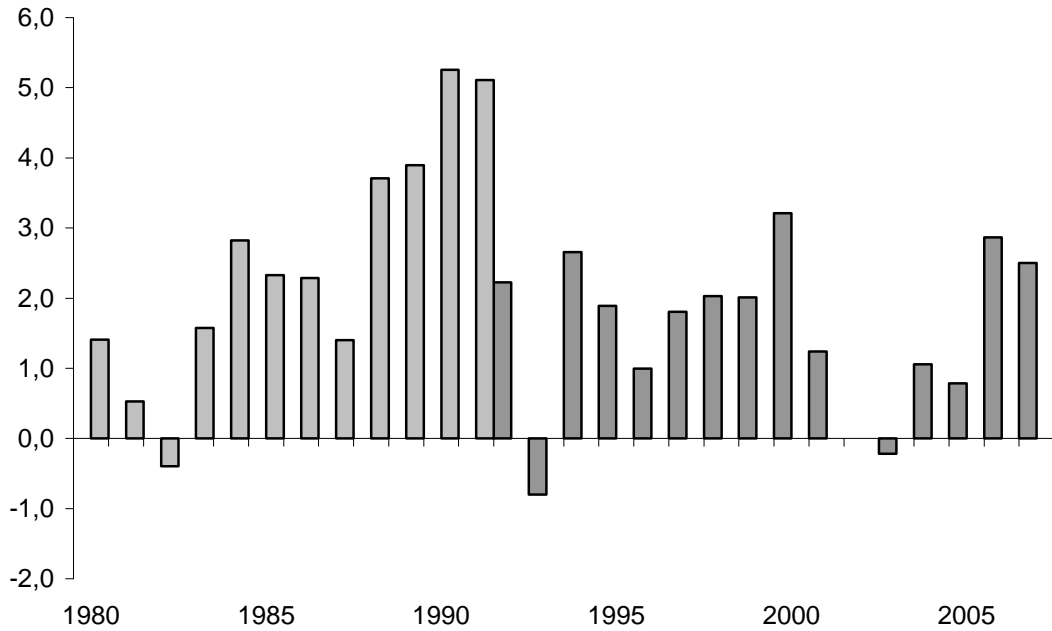


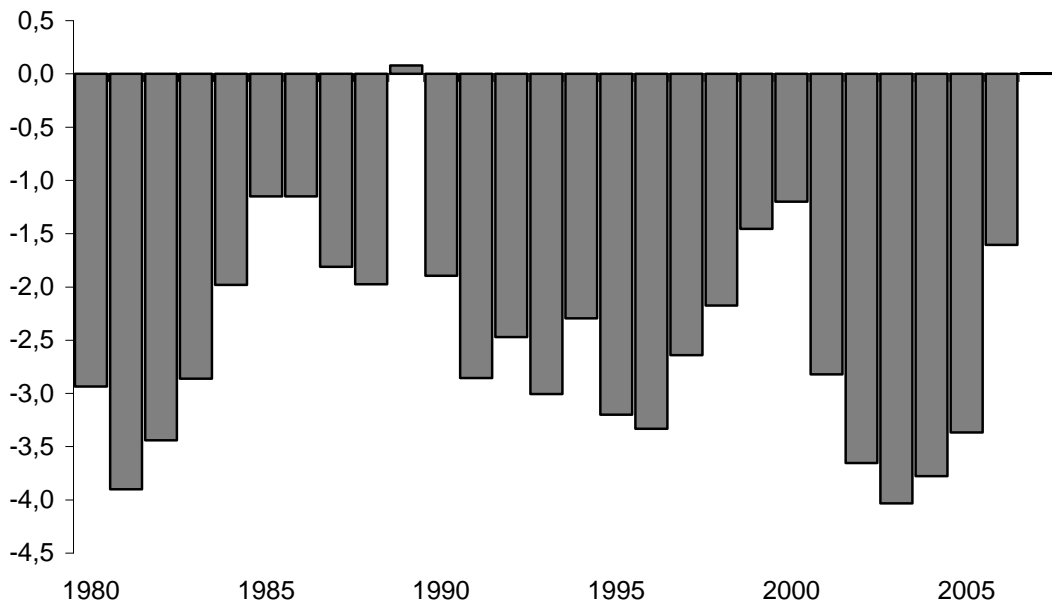
Table 1: **Per Capita Income in International Comparison**  
 Per capita GDP in purchasing power parity Dollar; Source: IMF

	1991		2007	
Luxembourg	34.731	1	Luxembourg	80.457
Norway	24.904	2	Norway	53.037
Switzerland	24.502	3	United States	45.845
United States	23.663	4	Ireland	43.144
Austria	20.385	5	Hong Kong	41.994
Netherlands	20.052	6	Switzerland	41.128
Japan	19.936	7	Netherlands	38.486
Canada	19.628	8	Canada	38.435
<b>Germany</b>	<b>19.536</b>	9	Austria	38.399
Denmark	19.421	10	Denmark	37.392
France	18.846	11	Sweden	36.494
Belgium	18.711	12	Australia	36.258
Sweden	18.388	13	Finland	35.280
Hong Kong	18.362	14	Belgium	35.273
Italy	17.986	15	United Kingdom	35.134
Australia	17.675	16	<b>Germany</b>	<b>34.181</b>
United Kingdom	16.943	17	Japan	33.577
Finland	16.486	18	France	33.188
Spain	15.012	19	Italy	30.448
Ireland	13.425	20	Spain	30.120

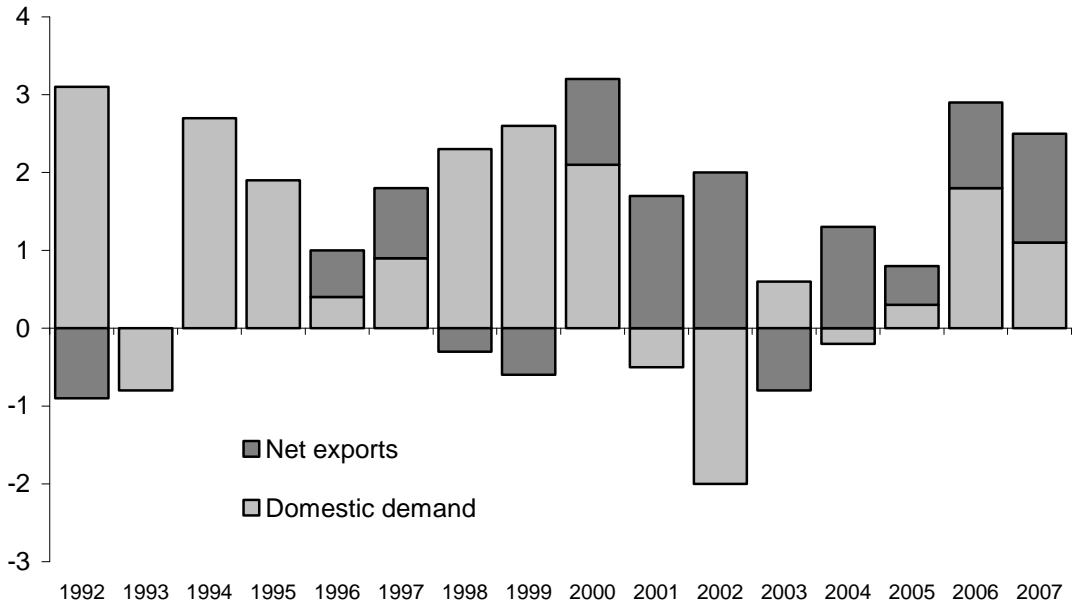
**Figure 2: Economic Growth in Germany**  
 Percentage change of real GDP from previous period, 1980 to 1990 West  
 Germany, from 1992 Germany; Source: Federal Statistical Office



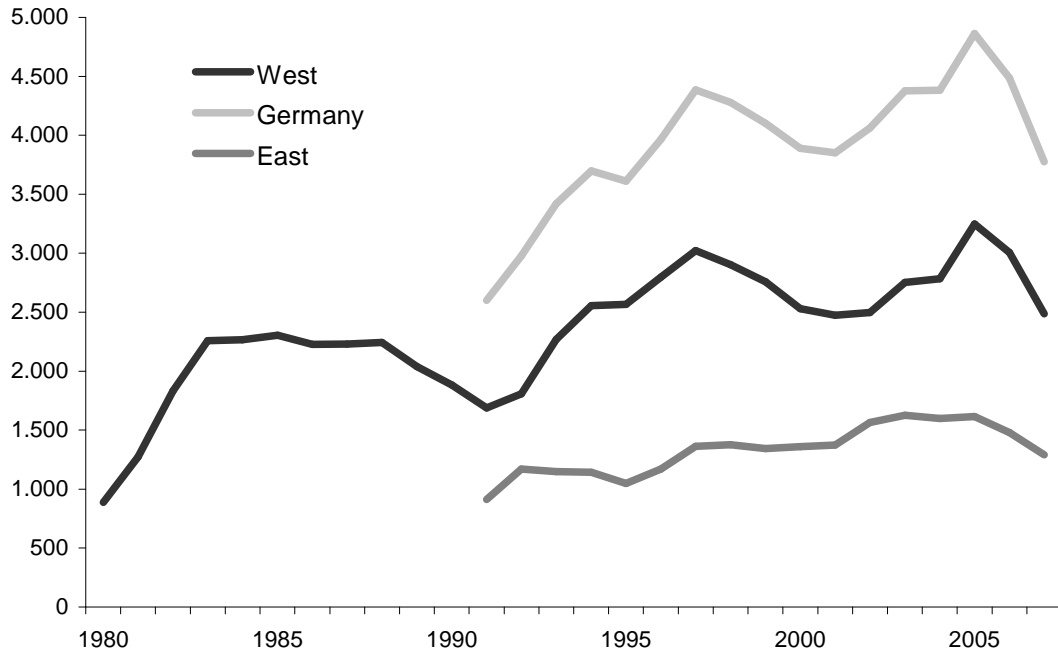
**Figure 3: Germany's Government Financial Balance**  
 General government financial balance as a percentage of GDP; 1980 to  
 1990 West Germany, from 1991 Germany; Source: Federal Statistical Office



**Figure 4: Domestic and Foreign Contributions to German Growth**  
 Contributions of net exports and domestic demand to the percent change  
 in real GDP in percentage points;  
 Source: Federal Statistical Office; own calculations



**Figure 5: Unemployment in Germany**  
 Registered unemployed persons in 1.000;  
 Source: Federal Employment Agency



**Table 2: Exchange Rates of the Deutschmark**  
 Deutschmark (DM) per unit of other currency

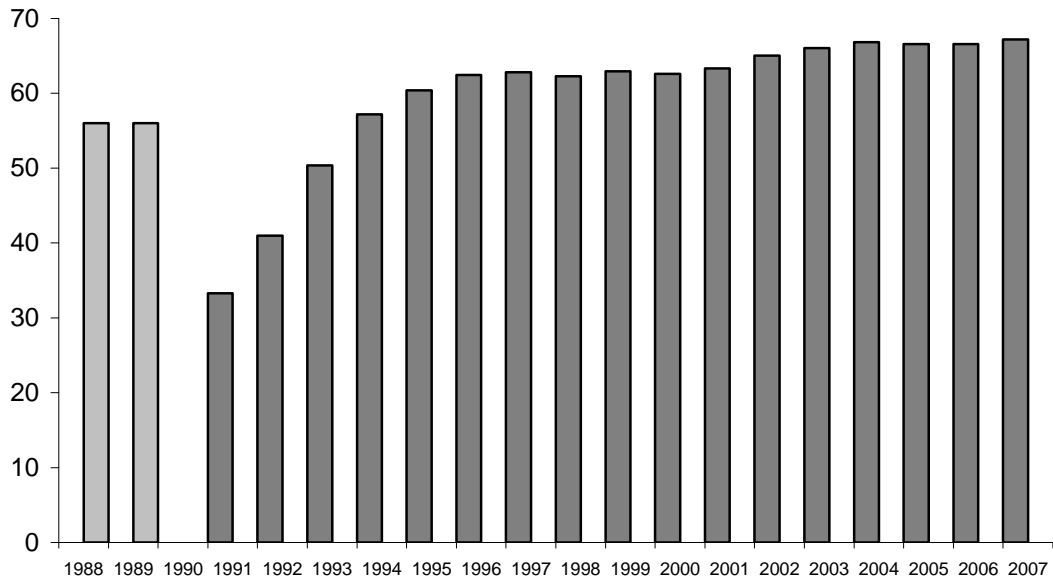
	100 Dutch Guilder	1 Pound Sterling	1000 Italian Lira	1 US-Dollar	100 French Franc	100 Japanese Yen	100 Austrian Schilling	100 Swiss Franc
1980	91,5	4,2	2,1	1,8	43,0	0,8	14,0	108,5
1981	90,6	4,6	2,0	2,3	41,6	1,0	14,2	115,3
1982	90,9	4,2	1,8	2,4	37,0	1,0	14,2	119,7
1983	89,5	3,9	1,7	2,6	33,6	1,1	14,2	121,6
1984	88,7	3,8	1,6	2,8	32,6	1,2	14,2	121,2
1985	88,7	3,8	1,5	2,9	32,8	1,2	14,2	120,0
1986	88,6	3,2	1,5	2,2	31,3	1,3	14,2	120,9
1987	88,7	2,9	1,4	1,8	29,9	1,2	14,2	120,6
1988	88,9	3,1	1,3	1,8	29,5	1,4	14,2	120,1
1989	88,6	3,1	1,4	1,9	29,5	1,4	14,2	115,0
1990	88,8	2,9	1,3	1,6	29,7	1,1	14,2	116,5
1991	88,7	2,9	1,3	1,7	29,4	1,2	14,2	115,7
1992	88,8	2,8	1,3	1,6	29,5	1,2	14,2	111,2
1993	89,0	2,5	1,1	1,7	29,2	1,5	14,2	111,9
1994	89,2	2,5	1,0	1,6	29,2	1,6	14,2	118,7
1995	89,3	2,3	0,9	1,4	28,7	1,5	14,2	121,2
1996	89,2	2,3	1,0	1,5	29,4	1,4	14,2	121,9
1997	88,9	2,8	1,0	1,7	29,7	1,4	14,2	119,5
1998	88,7	2,9	1,0	1,8	29,8	1,3	14,2	121,4

Source: Deutsche Bundesbank

**Figure 6: Convergence in Germany**

East German nominal per capita GDP as a percentage of the West German value;

Source: Federal Statistical Office; Heske (2005); own calculations



**Figure 7: Share of East German Manufacturing**

East German manufacturing value added as a percentage of total German manufacturing value added;

Source: Federal Statistical Office; own calculations

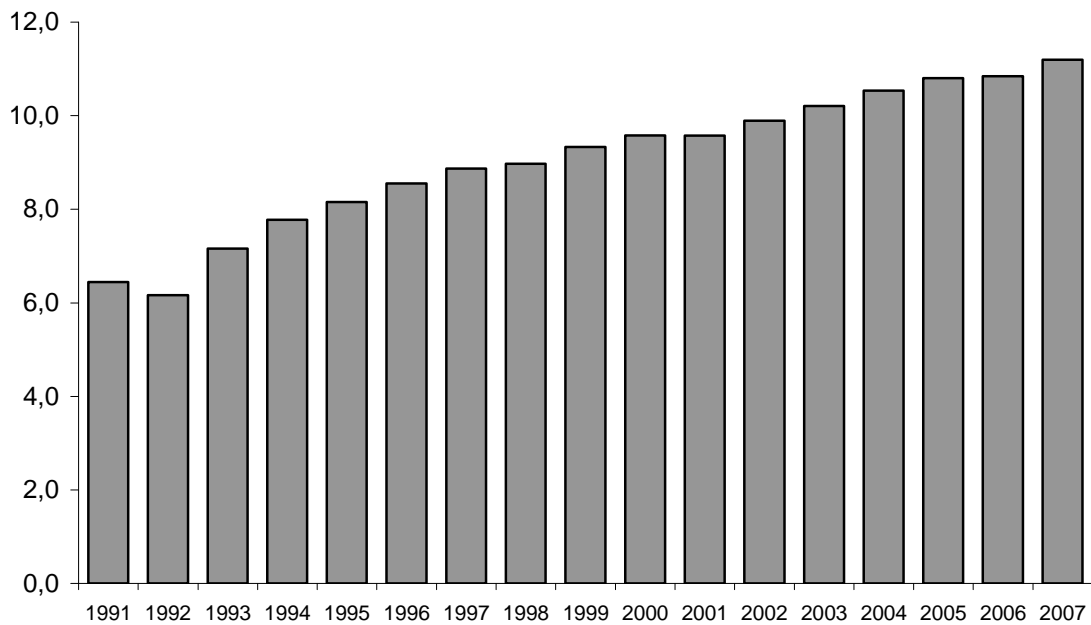


Table 3  
**The German Balance of Payments**  
Balances in billion Euro

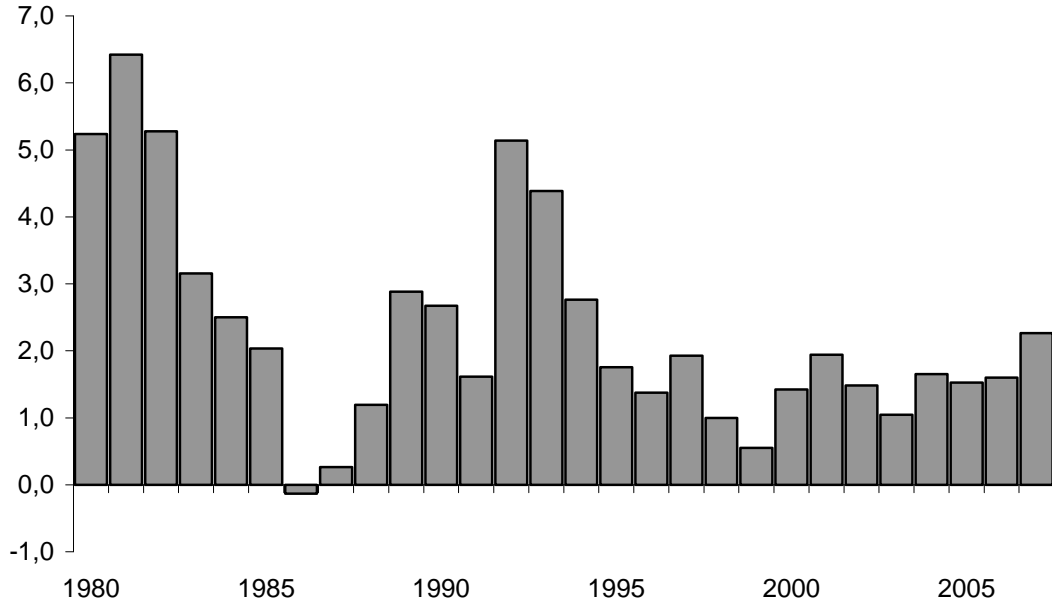
	Current Account		Capital Account	
	Balances <sup>1)</sup> in total	Goods Balances <sup>1)</sup>	Balances <sup>2)</sup> in total	Foreign Direct Investment Balances <sup>2)</sup>
1980	-12,4	6,9	0,0	-4,0
1981	-4,5	17,5	3,1	-4,8
1982	6,4	30,0	-1,4	-2,8
1983	6,4	25,3	-8,3	-2,6
1984	14,7	31,4	-19,1	-6,1
1985	26,4	41,8	-28,6	-6,9
1986	45,4	60,2	-43,2	-9,9
1987	43,0	62,0	-20,0	-7,2
1988	45,1	68,6	-64,2	-9,9
1989	54,7	72,1	-68,8	-7,8
1990	40,4	57,2	-46,3	-34,3
1991	-15,1	16,2	10,3	-13,5
1992	-15,3	22,3	46,8	-11,3
1993	-11,8	34,8	7,2	-12,8
1994	-16,8	42,2	34,0	-18,6
1995	-16,6	47,6	37,0	-24,8
1996	-10,8	50,4	12,4	-33,5
1997	-8,9	59,5	3,4	-26,2
1998	-14,7	64,9	13,1	-57,8
1999	-25,2	65,2	-10,4	-49,4
2000	-35,2	59,1	34,2	153,8
2001	0,4	95,5	-11,8	-14,8
2002	43,0	132,8	-38,5	36,7
2003	44,0	129,9	-61,8	23,5
2004	102,9	156,1	-123,0	-24,8
2005	116,6	158,2	-130,7	-21,6
2006	141,5	159,0	-151,1	-31,5
2007	184,2	198,6	-220,9	-85,1

1) Exports minus imports

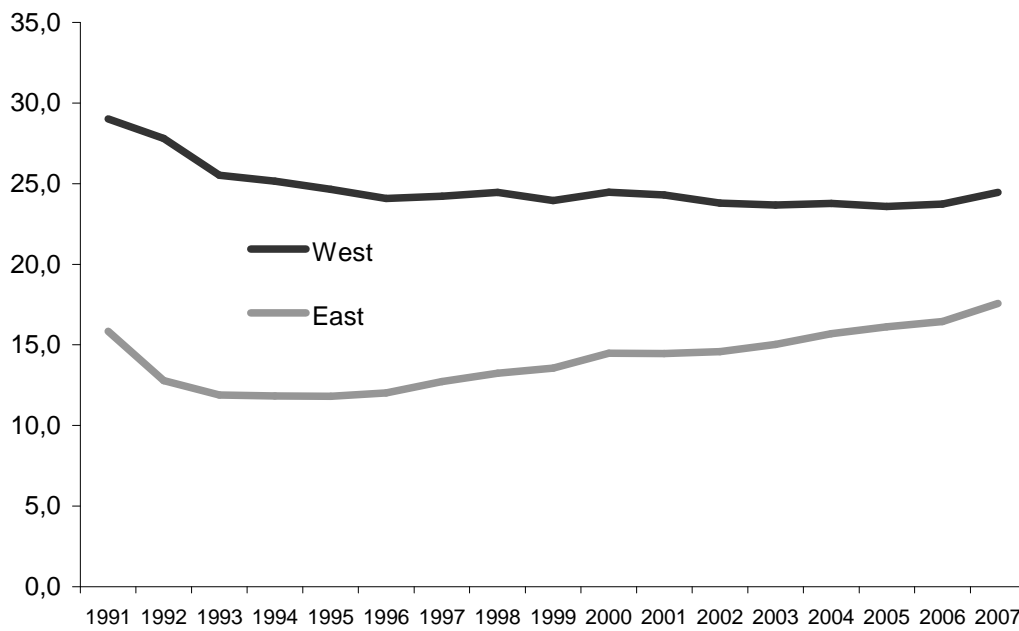
2) Inflows minus outflows

Source: Deutsche Bundesbank

**Figure 8: Inflation in Germany**  
 Percentage change of CPI from previous year, 1980 to 1991 West  
 Germany, from 1992 Germany; Source: Federal Statistical Office

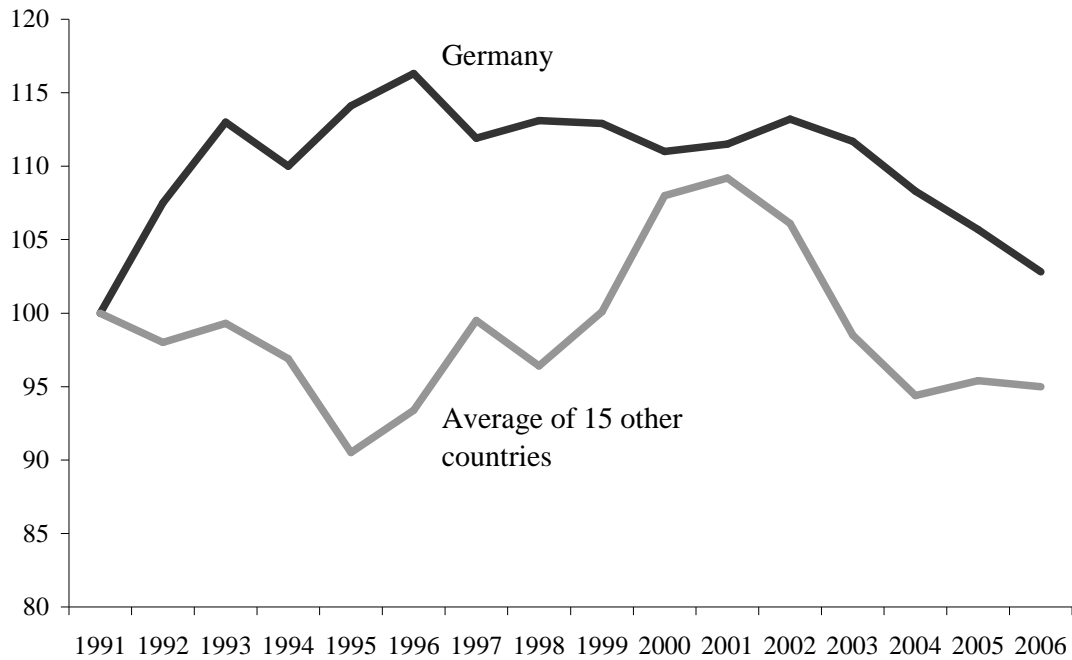


**Figure 9: Structural Change in Germany**  
 Manufacturing value added as a percentage of total value added in West  
 and East Germany respectively:  
 Source: Federal Statistical Office; own calculations

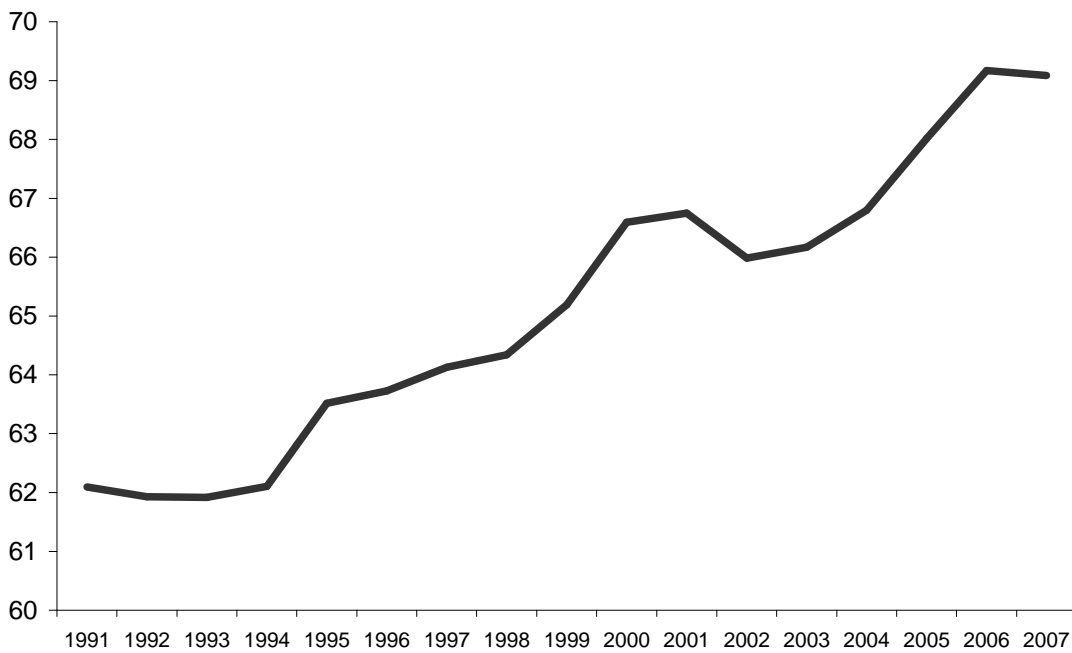




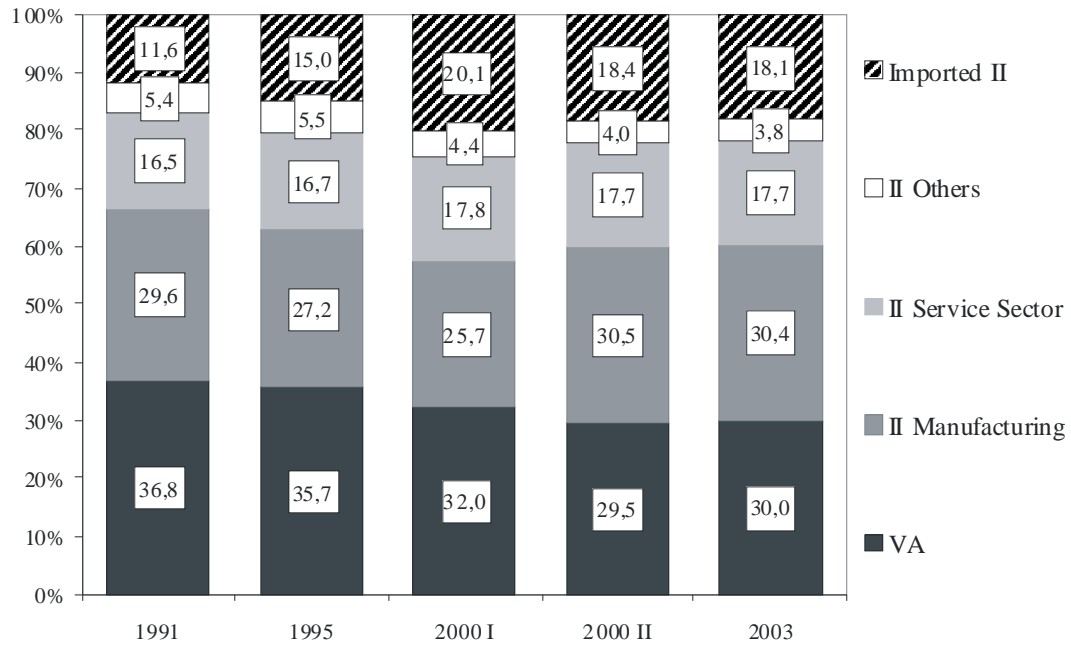
**Figure 10: Unit Labour Costs in International Comparison**  
 Relation of labour costs to labour productivity in the manufacturing sector;  
 Index 1991=100; Source: Schröder (2007)



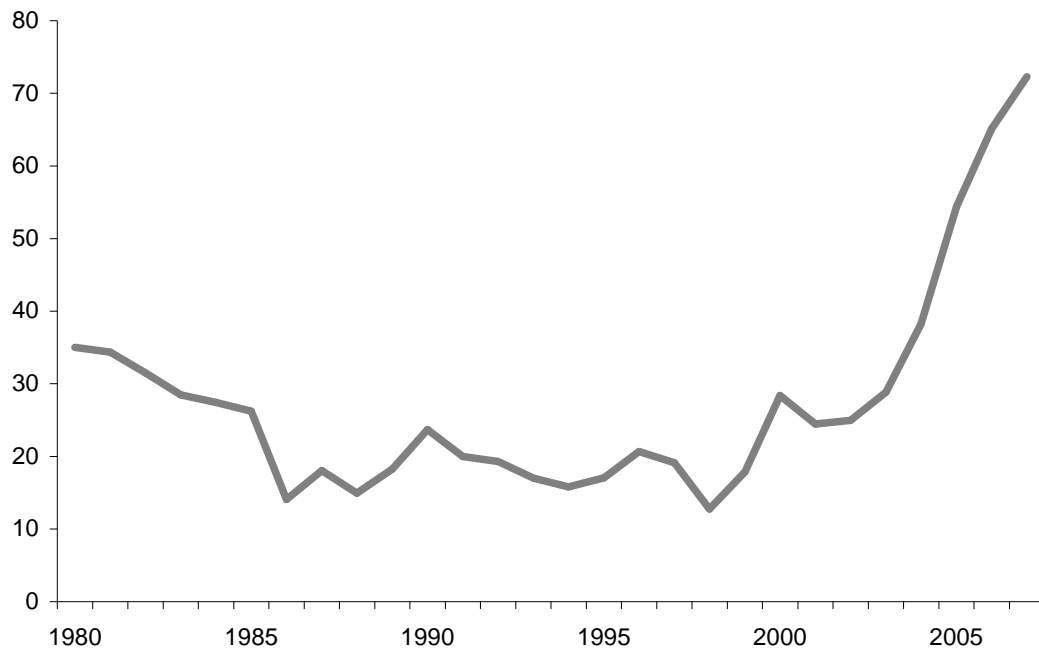
**Figure 11: Intermediate Input Shares**  
 Intermediate inputs as a percentage of manufacturing production;  
 Source: Federal Statistical Office; own calculations



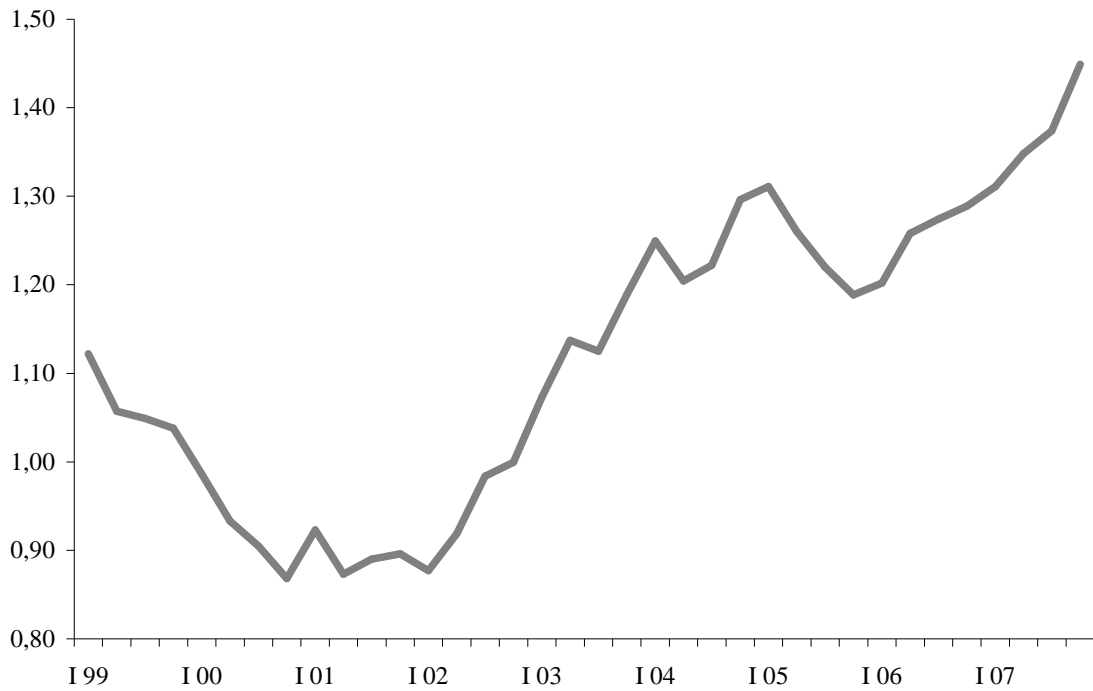
**Figure 12: Structure of Manufacturing Production**  
 Value added (VA) and intermediate inputs (II) as a percentage of manufacturing production on base of input-output tables;  
 Source: Federal Statistical Office; own calculations



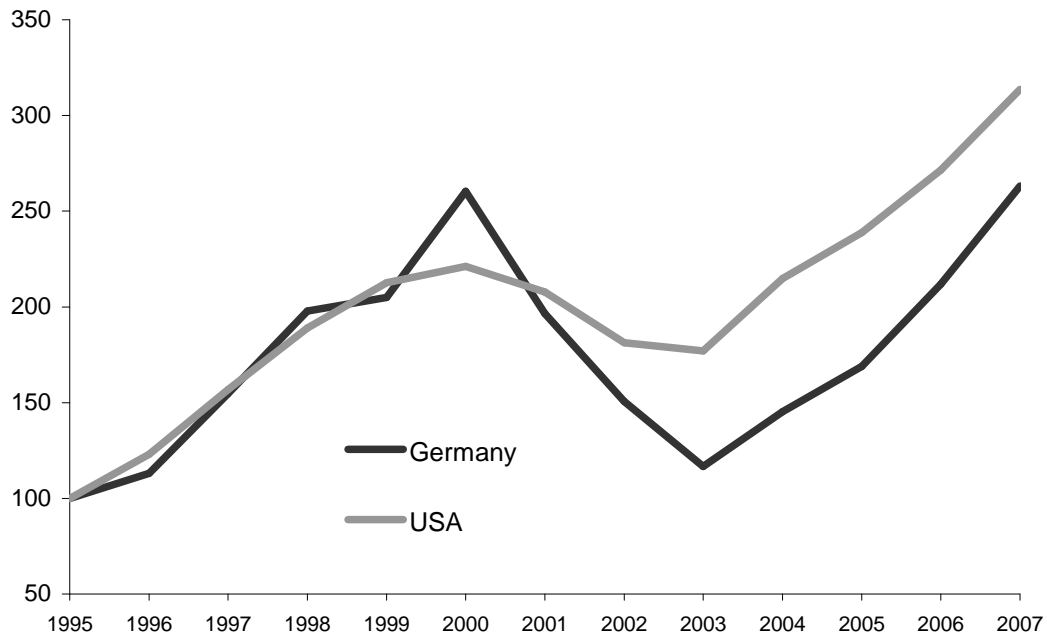
**Figure 13: Development of the Oil Price**  
 Annual average price per barrel Brent crude Oil in US-Dollar;  
 Source: OECD



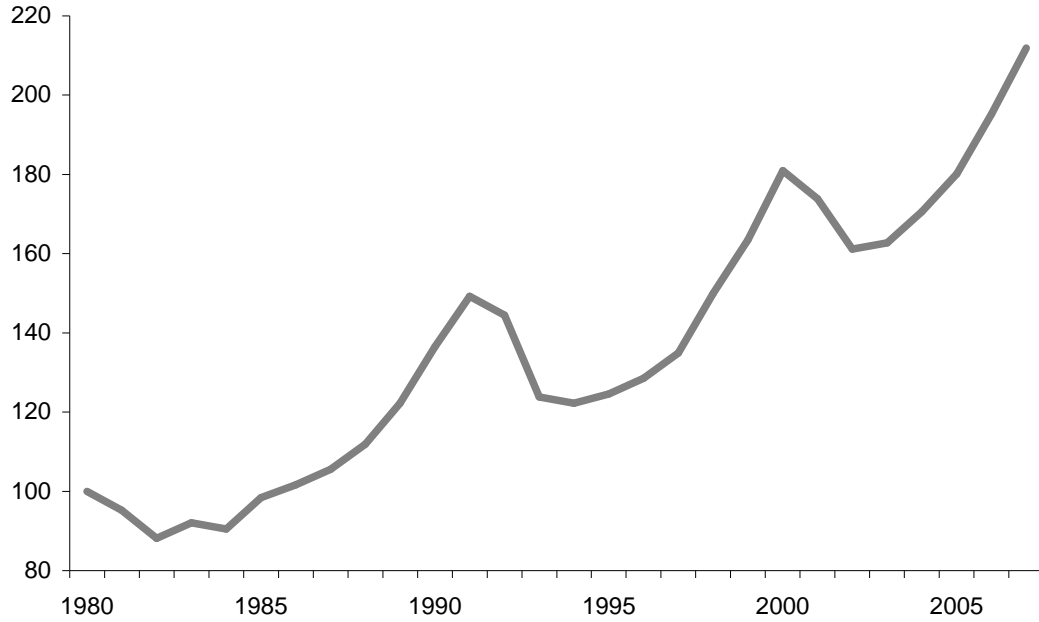
**Figure 14: Euro-Dollar Exchange Rate**  
 US-Dollar per Euro; Source: European Central Bank



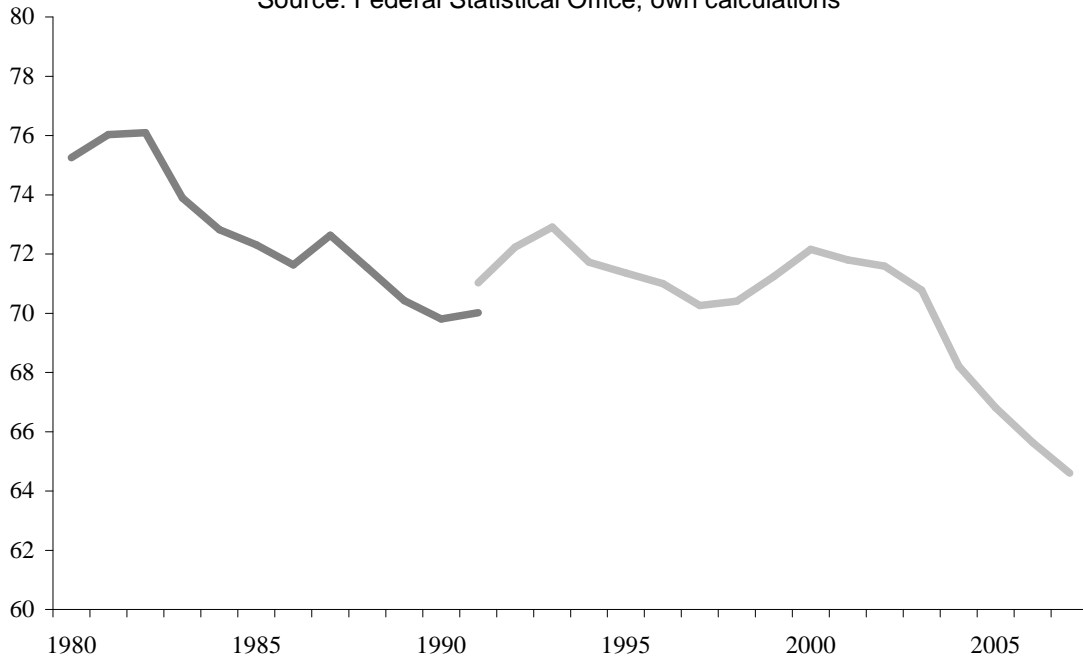
**Figure 15: Share Prices in Germany and USA**  
 Germany: CDAX; USA: NYSE Composite; Index 1995 = 100;  
 Source: OECD; own calculations



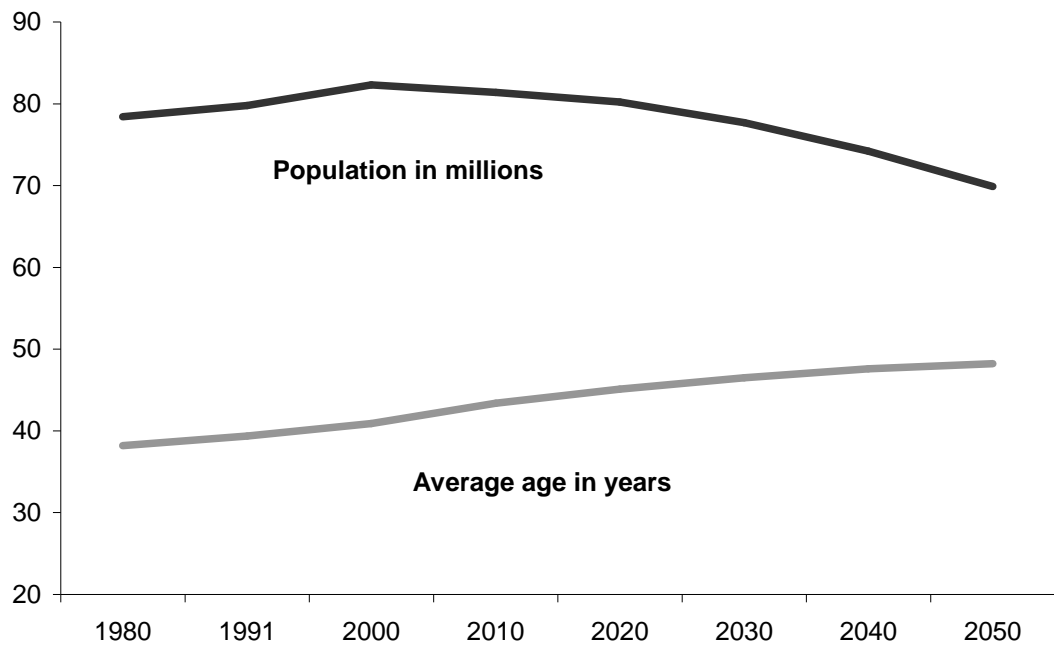
**Figure 16: Investment in Germany**  
 Investment in Machinery and Equipment; from 1980 to 1991 West  
 Germany, from 1992 Germany; Index: 1980 = 100;  
 Source: Federal Statistical Office



**Figure 17: Labours Share in Germany**  
 Labour compensations as a percentage of national income; 1980 to 1991  
 West Germany, from 1991 Germany;  
 Source: Federal Statistical Office; own calculations



**Figure 18: Population and Average Age in Germany**  
Source: Federal Statistical Office



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