

## German intra-euro-area trade: cyclical effects and structural determinants

In the past year, the German economy has increasingly been setting the pace of economic activity in the euro area. This stands in stark contrast to the preceding ten years. The marked gap in growth during this period was not so much the result of other economies catching up economically or of the stimuli generated by interest rate convergence in some member states during the run-up to monetary union. Rather, the main reasons were misaligned economic policies and structural failings; these led to a persistent disruption of growth domestically and were accompanied by losses of market shares in the euro area.

It was only gradually and with much effort that the German economy worked itself out of this difficult situation. One crucial element of this success story was wage policy in Germany – a learning process that was set in motion by the locational and investment problems of major industrial sectors and the hard core of unemployment. This process, along with enterprises' restructuring efforts, played a major part in the regaining of price competitiveness. In this market-friendly manner, Germany's intra-euro-area trade has gone from having a stabilising function for the German economy to becoming more and more of a stimulus for its euro-area partners.

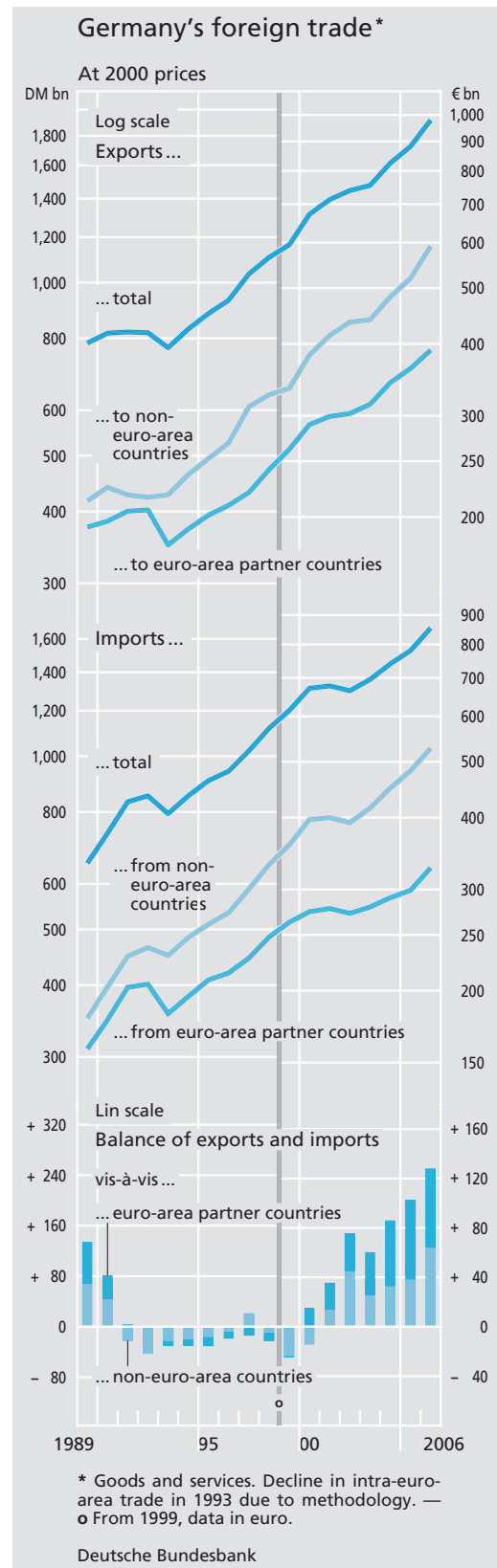
## Germany's intra-euro-area trade: a retrospective view

*Growth of exports since late 1990s considerably larger...*

Between the launch, at the beginning of 1999, of Stage Three of European economic and monetary union (EMU) and 2006, German intra-euro-area exports grew in real terms by an annual average of 6¼%.<sup>1</sup> Since bottoming out in 1998, the share of German intra-euro-area goods exports in the euro-area partner countries' total imports increased by 2¼ percentage points to 19%. This was still clearly below the reference figure (22¼%) in 1989, the year prior to German reunification.

This provides a framework in which to view German economy's export successes. Furthermore, German enterprises' real exports to their euro-area partners grew less sharply than their exports to non-euro-area countries, which went up by 7½% per year since 1999. This was due mainly to the fact that the export markets in non-euro-area countries as a whole grew more sharply (+7¾% per year) than demand within the euro area (+5% per year). In the period from 1999 to 2006, the euro-area partner countries' exports of goods to non-euro-area countries, with an overall increase in volume of 44%, lagged considerably behind the German figure of 74¾%. As a result, in the same period Germany's share of the volume of goods exported by euro-area countries to non-euro-area countries went up 4½ percentage points to 37¼%.

<sup>1</sup> The figures from the balance of payments statistics were deflated by the German foreign trade prices. The volume data for 2006 are partly estimated.

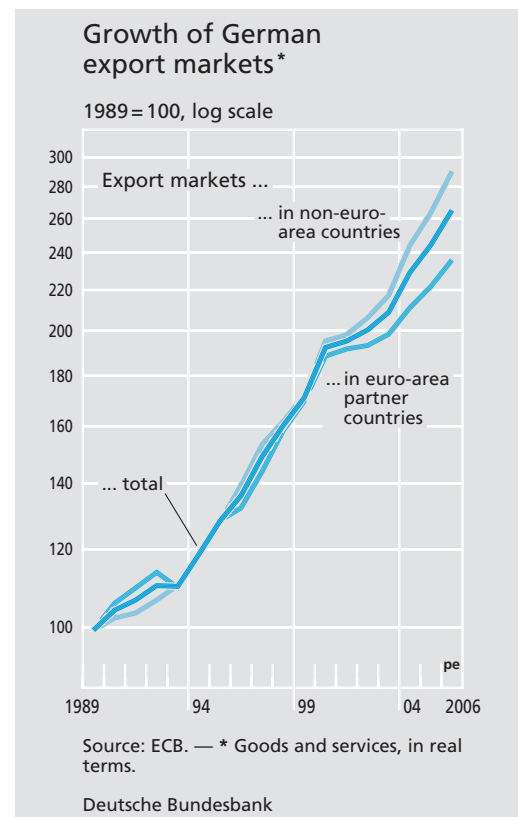


... than for  
imports

At constant prices, Germany's imports of goods and services from its euro-area partners since the beginning of Stage Three of EMU grew by a total of 3½% annually, and, therefore, considerably more slowly than exports.<sup>2</sup> Especially in the 2001-2005 period, German imports showed only slight growth. In 2002, they even fell. It was not until 2006 that demand for euro-area imports rebounded, achieving, at +9½%, its fastest rate of growth since 1991. In the 1999-2006 period, however, the total volume of Germany's euro-area partners' intra-euro-area imports rose considerably more sharply than German intra-euro-area imports; Germany's share fell from 25% in 1998 to 23% in 2002. The trend was subsequently pointing upwards slightly until 2005. In 2006, however, the figure shot up by almost 1 percentage point to 24¼%.

Marked  
increase in net  
exports overall

The buoyant growth of German real exports since 1999, with a concurrent subdued increase in imports, led to a significant rise in real net exports (goods and services). The balance of trade with the euro-area partners was transformed from a €6¼ billion deficit in 1998 to a surplus of €64½ billion in 2005. In 2006, the balance fell by a marginal €¾ billion. In terms of value, the balance did not increase quite so sharply, ie from +€3¼ billion to +€61¾ billion. Germany was able to rack up large surpluses with, in particular, France, Spain, Italy, Belgium and Austria. Owing to the relatively moderate development of German export prices since 1998, the terms of trade between Germany and its euro-area trading partners – calculated on the basis of



the export and import price indices – has fallen by 7%.

In real terms, the balance of trade in goods and services with non-euro-area countries in the past eight years has grown more or less in line with intra-euro-area trade – ie from -€5 billion to €64½ billion – although the increase was smaller in terms of value. There was a marked growth in the nominal surpluses in trade in goods and services with the United States and the United Kingdom, while the bilateral deficit with China continued to increase perceptibly. Despite the sharp growth in nominal German energy imports, the bal-

<sup>2</sup> Services were deflated with the export prices for goods as import prices (which would seem the more obvious choice) are influenced heavily by the price-volatile commodity imports.

Germany's share of euro-area foreign trade\* and world market shares



Sources: ECB, IWF and Bundesbank calculations. — \* Goods. — 1 Goods and services.  
Deutsche Bundesbank

ance of trade with the OPEC countries and Russia has deteriorated only slightly in the past few years since German exporters have benefited considerably from the dynamic growth in demand from these countries, which was driven by higher oil revenues. The higher cost of imports of crude oil and other raw materials has been accompanied since 2004 by a noticeable (7½%) worsening of the terms of trade with non-euro-area countries.

The high level of German net exports to its euro-area partners and non-euro-area countries form the core of the substantial current account surplus, which amounted to 5% of nominal GDP in 2006. In this connection, Germany has been called upon from various quarters to reduce its large surplus in order to contribute to the resolution of global external imbalances.<sup>3</sup> Apart from the open question of how to implement this objective in economic policy terms, it is often overlooked that the euro area (including the German surplus) has a current account deficit with the rest of the world of ¼% of euro-area GDP. The euro area as a whole can therefore scarcely have made a contribution to the global imbalances.

*Germany's surplus position: a global problem?*

### Longer-term trends and determinants

The sharp growth in exports and the relatively subdued demand for imports over the past few years, which have led to the substantial

*Major changes in foreign trade due to reunification*

<sup>3</sup> See UNCTAD, Trade and Development Report, 2006, p 5 ff, where Germany is counted among the main originators of the global external imbalances.

German surplus position, can be viewed in the proper context only against the backdrop of macroeconomic developments in the 1990s following German reunification. Since the end of the 1990s, German exporters have done no more than regain some of the ground – both in euro-area sales markets and in extra-euro-area trade – that had been “lost” at the beginning of that decade as a result of reunification. The rapid growth in domestic demand between 1990 and 1992, much of which was due to monetary union with the former GDR and the major pent-up desire for goods among the general public in eastern Germany, led many German enterprises – given the high level of capacity utilisation – to give preference to servicing the domestic market. Simultaneously, imports in that three-year period grew by as much as 31¼%.

*Strong import pull ...*

The mere fact that the goods surplus declined from DM 141 billion in 1989 to DM 31½ billion in 1991 and did not peak again until 1998-99 is evidence enough of how strongly the economic consequences of reunification shaped Germany’s foreign trade. In 1990 and 1991, the pull of imports from Germany, together with moderate export growth, clearly supported overall economic activity or counteracted the economic downturn that was already under way in the other EU countries.<sup>4</sup> The positive demand impulses from Germany were, however, accompanied by potential retarding effects since rising interest rates in Germany, deemed appropriate in the context of stability policy, also impacted on the other EMS countries.

This import pull caused by unification was joined by a substantial deterioration in the German economy’s price competitiveness due, first of all, to overly generous pay agreements in western Germany and the rushed adjustment of wages in the eastern part of the country. National unit labour costs in 1995 were 13% higher than in 1991 (data for Germany as a whole do not go back further). The sharp appreciation of the D-Mark during this period was an additional factor. The indicator of price competitiveness (calculated by comparison with 19 industrial countries based on the deflators of total sales) shows a 12½% deterioration in the 1989-1995 period. The losses against non-EU countries were, in fact, even somewhat larger than against the later euro-area partners.

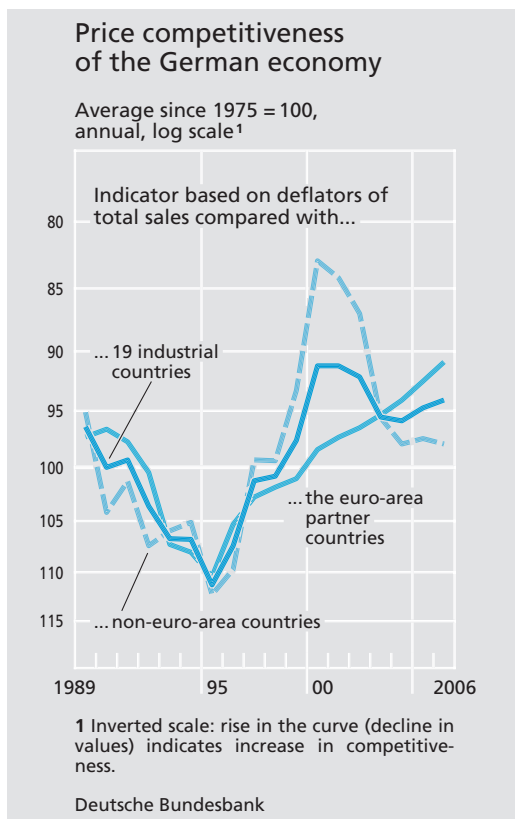
*... and deterioration in price competitiveness*

Furthermore, German domestic economic activity was increasingly affected by the severe fiscal strains arising from unification, which were due mainly to the sudden sharp increase in government borrowing and the acute process of adjustment in the construction industry which began in 1995.<sup>5</sup> The result was a marked slowdown in growth in the mid-1990s, which persisted – with a brief interruption due to the New Economy boom in 1999 and 2000 – until the middle of this decade. This was accompanied by a considerable

*Pronounced slump after unification boom had run its course*

<sup>4</sup> See Deutsche Bundesbank, The impact of the German unification process on economic trends in Germany’s European partner countries, Monthly Report, July 1992, pp 21-27.

<sup>5</sup> See European Commission, Germany’s growth performance in the 1990’s, Directorate General for Economic and Financial Affairs, European Economy, Economic Papers, No 170, May 2002, p 1f, and European Commission, Raising Germany’s Growth Potential, Directorate General for Economic and Financial Affairs, European Economy, European Economy, Occasional Papers, No 28, February 2007, p 13 ff.



reduction in employment and a matching rise in unemployment, which resulted in a dramatic deterioration in public finances.

*Improvement in competitiveness since mid-1990s*

In the specific situation in which Germany found itself in the mid-1990s, not very many effective possibilities of reversing this development or parameters for adjustment were, in fact, available. One obvious option was to address the increasingly difficult labour market situation by means of sustained and far-reaching wage restraint<sup>6</sup> and to restore Germany's since diminished attractiveness as a location for production and investment. Another avenue was offered by the opening of the Iron Curtain, which provided German industry with an opportunity to lower costs on a substantial scale by shifting production to the transition countries in central and eastern

Europe. This process accelerated still further in the latter part of the 1990s and early part of this decade when the accession of the most of the neighbouring transition countries to the EU and, therefore, the convergence of legal systems with west European standards took on ever firmer shape.

In the run-up to the beginning of Stage Three of European monetary union on 1 January 1999, the German economy was confronted with new challenges. With the D-Mark as one of the most stable currencies and low risk premiums in the interest rate to match, enterprises enjoyed relatively low capital costs well into the 1990s. The rapid convergence of nominal interest rates in the partner countries towards the lower German level lessened the German economy's comparative financing advantages. Calculated on the basis of national consumer prices, Germany very soon found itself in the uncomfortable position of having the highest real interest rates among the euro-area countries. This may have, at times, been one factor among several others contributing to Germany's relative and absolute weak economic growth, although it should not be viewed in isolation.<sup>7</sup>

*New underlying conditions as a result of Stage Three of EMU*

<sup>6</sup> Between 1992 and 1997, the number of persons in work declined by 3% and the number of unemployed went up by 1.8 million to 4.4 million. In 1997, the unemployment rate reached a new peak at 11.4%. This made Germany one of the countries in the euro area with the greatest labour market problems.

<sup>7</sup> The ex post real interest rate, which is calculated on the basis of the actual rates of inflation and is often used as an argument in this context, is hardly relevant to enterprises' investment decisions. Rather, these decisions are based on the ex ante real interest rate, ie the nominal interest rate adjusted for inflation expectations. During this period, the national differences in inflation expectations were, however, significantly smaller than the differentials in actual interest rates. Moreover, long-term inflation expectations are converging in the euro area.

This is because the retarding effects via the real interest channel were counteracted by more moderate price developments than in most other euro-area countries, which gradually led to an improvement in Germany's competitive position within the euro area. Through this "competition channel", German exports to neighbouring countries were boosted and domestic suppliers' position in the German market was strengthened.<sup>8</sup> Between the start of Stage Three of EMU and the end of 2006, the indicator of price competitiveness improved by 11¼%, and has increased by as much as one-fifth since bottoming out in the second quarter of 1995. A key part in this was played by marked wage restraint, to which – given the high level of unemployment – the German economy ultimately had no alternative.

*Mixed developments in price competitiveness in non-euro-area markets*

Price competitiveness vis-à-vis non-euro-area countries, however, has been shaped to a marked extent by the euro's exchange rate. In 1999 and 2000, German exporters benefited from the sharp depreciation of the euro against the currencies of major trading partners, especially the US dollar. In the years that followed, the euro was clearly trending back up. The indicator of price competitiveness vis-à-vis non-euro-area countries deteriorated by almost one-fifth during this six-year period. Its value therefore roughly corresponded to its long-run average. In the mid-1990s, price competitiveness had been much worse.<sup>9</sup>

## The significance of foreign trade for growth in Germany since 1999

In mathematical terms, the sharp 80¼% growth of real exports (as defined in the national accounts) since 1999 added 21½ percentage points to the increase in total value added. At constant prices, imports rose by 59% during the same period. Viewed in the categories of the national accounts, this resulted in a calculative reduction in GDP growth of 15¼ percentage points. On balance, net exports thus made a 6¼ percentage point contribution to growth, with total value added rising by 11½%.

*External sector's contributions to overall GDP growth and ...*

Breaking down exports and imports of goods and services by euro-area and non-euro-area countries produces the following picture: real exports to euro-area countries provided a cumulative contribution to growth of 7¾ percentage points in the period from 1999 to 2006. Exports to non-euro-area countries generated an increase in GDP of 13¾ percentage points. Accordingly, imports from other euro-area countries had negative cumulative growth effects amounting to 4½ percentage points, and exports from non-euro-area countries had negative cumulative

*... broken down by euro-area and non-euro-area countries*

<sup>8</sup> See also European Economic Advisory Group at CESifo, Report on the European Economy, February 2007, p 21 f.

<sup>9</sup> In this context, it should be noted that the development of German exports and of imports is determined in the longer run more by the growth of export markets and/or domestic demand than by relative prices. However, price competitiveness is more important in trade with euro-area partner countries than in non-euro-area markets. See K Stahn, Has the impact of key determinants of German exports changed? Bundesbank Discussion Paper Series 1: Economic Studies, No 7, 2006, and C Stirböck, How strong is the impact of exports and other demand components on German import demand? Bundesbank Discussion Paper Series 1: Economic Studies, No 39, 2006.



growth effects of 10¾ percentage points. This means that, in terms of the balance, net exports to the euro area and to non-euro-area countries contributed 3¼ and 3 percentage points respectively to growth throughout the reporting period.

The somewhat higher contribution of intra-trade to growth is due to real net exports to the euro area having risen continuously since 1999, whereas net exports to non-euro-area countries shrank in 2002 and 2003, not least owing to the appreciation of the euro. In addition, net exports in trade with euro-area partner countries rose more sharply in 2004 and 2005 than in trade with non-euro-area countries. In 2006, however, net exports in intra-trade fell marginally, whereas extra-trade recorded a considerable rise in net exports. During the 2002-2005 period, which was a difficult one for the German economy, real net exports contributed 3 percentage points to growth, of which two percentage points were attributable to trade in goods with euro-area countries and 1 percentage point to trade in goods with non-euro-area countries. During this time, GDP rose by no more than a total of 2%, and domestic demand fell by 1%.

*Exports and imports closely connected in terms of growth*

Exports and imports are becoming ever more closely interconnected, even though real growth in German imports was, on the whole, mostly lagging well behind real growth in exports in the years following the launch of the Stage Three of monetary union in 1999. The reason for this is that the import content of German goods exports rose by nearly 10 percentage points in the second

half of the 1990s and had shown a further slight rise to just under 42% by 2005. The success of the German economy's exports has thus also been reflected in a corresponding increase in demand for imported goods. There are indications here that imports from the euro area and those from non-euro-area countries are nearly equivalent in terms of their significance for the production of export goods in Germany. An ECB study for the year 2000, for example, puts the relevant percentage of imports from the (pre-enlargement) EU at 22½% and that of imports from the rest of the world at 20½%.<sup>10</sup> The ratio for the euro area is likely to have been slightly lower than that given for the EU because the former contains a smaller group of countries.

Simulations to estimate the growth effects of export-induced German imports find that, given an average import content of 40% since 2004, around 45% of German imports are attributable to exports. In order to study how far the other euro-area countries have been involved in the sharp rise in German exports via this channel, a simulation was used in which the level of German imports was reduced by precisely the same export-induced percentage. In this context, the assumption was that of a sustained fall in German demand for foreign goods and services to a level 45% lower than the baseline – the actual level of imports. In the first year, ¾ percentage point lower growth is then shown for the other euro-area countries taken as a whole. In the second year, the contractionary

*Growth effects in euro-area partner countries due to export-induced German imports*

<sup>10</sup> See ECB, Competitiveness and the export performance of the euro area, Occasional Paper Series, No 30, June 2005, p 65.



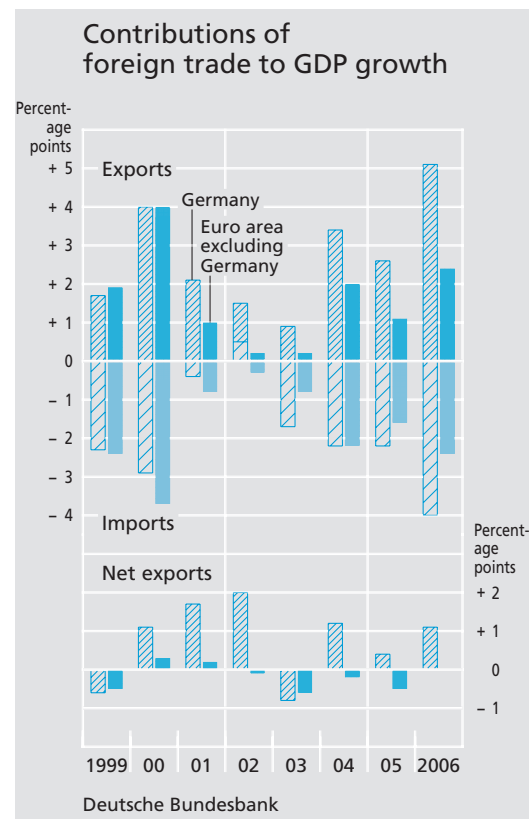
effect is still at just under ½ percentage point. These results should, however, be interpreted with caution since, in the simulation, the other external variables (commodity prices, interest rates within the euro area, exchange rates and all variables for non-euro-area countries) remain exogenous. The figures stated here therefore comprise only direct effects. Real economic effects and price-related spill-over effects produced by foreign trade links within the euro area are thus not taken into consideration.

*Growth differentials in the euro area*

German exports to euro-area partner countries having a marked growth lead over imports is already implied by the fact that some countries have been on a steeper growth path than the German economy over the past few years. One reason for this is that some countries' economies are still in the process of catching up. Other factors to be taken into account are the rapid process of interest rate convergence prior to monetary union and the increasing financial market integration in the euro area, which has provided considerable benefits to the former high-interest countries.<sup>11</sup> Moreover, economic growth in Germany was adversely affected in the 1990s by the well-known exceptional strains and undesirable developments – not least in the wake of reunification. The upshot of all of this was that the German economy had mostly been at the bottom of the euro-area growth table since the mid-1990s.

*Influence of wage moderation on German foreign trade*

Another major factor behind the diverging trends of exports and imports in intra-euro-area trade was wage moderation in Germany. First, through improving domestic suppliers'



price competitiveness, it stimulated exports and tended to reduce import substitution. Second, owing to the small rises in income, overall consumption demand was initially dampened and, owing to the matching weak increase in tax revenues and social security contributions, the pressure to consolidate public sector budgets mounted. Over the 1999-2006 period as a whole, compensation per employee in the euro area, excluding Germany, rose 13¾% more sharply than in Germany. Owing to the weaker rise in labour productivity, unit wage costs rose even more quickly by 16½%. The shifts in competitiveness in the euro area therefore reflect the fact that, in some member states, general wage

<sup>11</sup> See European Commission, Widening current account difference within the euro area, Quarterly report on the euro area, December 2006, p 31.



developments tracked productivity growth only to a limited degree. Measured in those terms, the cumulative differential consumer price inflation, at 7% in 2006, was still relatively moderate.

Using the Bundesbank's econometric model, an attempt was made to estimate the influence of wage moderation on foreign trade through real depreciation and the retarding

effect on import demand. Improved competitiveness through the transfer of production to lower-cost reform countries and emerging market economies was disregarded.<sup>12</sup> In the simulation, it was assumed that gross wages and salaries per employee had risen by 2½% on average in the period since 1999 and not by just over 1%, which was actually the case. That would have made employee compensation in 2006 9¼% higher. Real imports would have exceeded their actual value by 3½% and exports by ¾%. This means that the cumulative contribution of foreign trade to growth would have been noticeably lower (1¼ percentage points); however, because of the much stronger private final demand from residents, real GDP would have surpassed the actual figure by as much as just over ½%. The price to be paid on the labour market, however, would have been quite high; the number of employed persons in 2006 would have been 1¾% below the base line. Over the longer term, in particular, the sustained loss of price competitiveness for the German economy and, ultimately, also for the euro-area would have had even more severe negative growth implications. Moreover, the inevitable need for adjustment in the long run and the pressure for reform would have become even greater.

This view was confirmed by developments in the economy in the past year. Accordingly, the debate on how far economic activity in the neighbouring countries has been ham-

*German economy recently once again engine of economic activity in euro area*

<sup>12</sup> See Deutsche Bundesbank, Germany in the globalisation process, Monthly Report, December 2006, pp 17-34, and S Danning and F Joutz, What explains Germany's rebounding export market share?, IMF Working Paper, February 2007, p 15.

pered by Germany's weak economic growth, especially in the 2001-2005 period, and its increasing competitiveness over the past few years, has now become considerably less important.<sup>13</sup> In 2006, German imports of goods and services from the rest of the euro area rose at a real rate of 9½%. This was the first time in some while that they had increased more strongly than exports (+7½%). The result was a slight decline in net exports. This means that Germany's neighbours benefited significantly last year from the renewed more buoyant economic activity in Germany. For the euro area as a whole, it will also be a long-term advantage that Germany, as its largest economy, has recovered its footing, and that the current upswing still offers a continuing positive outlook, not least owing to the success achieved in consolidation and restructuring.<sup>14</sup> In 2006, this already played a major part in effecting a noticeable reduction in growth differentials between the euro area and the other major industrial countries, especially the USA.

that have been introduced – has been a success. At the same time, this means that, for euro-area member states that need to restore their price competitiveness and enhance their attractiveness as a location for production and investment, there is no sustainable or effective alternative to the path embarked upon by Germany. This insight is now also gaining increasingly widespread support in academic discourse.<sup>15</sup>

Seen in this light, Germany is, therefore, a classic example of how market-related adjustments can operate and be effective under the rules of a monetary union. From the lengthy and arduous adjustment process in Germany since the mid-1990s, it may also be concluded that unwelcome developments in wage policy are extremely difficult to correct retrospectively. Furthermore, such corrections, in a relatively large and very open economy such as Germany's, will inevitably also extend well into the external sector.

## Conclusions

*No economic policy alternative to Germany's policy of wage moderation*

On the whole, the considerable improvement in economic growth in Germany has shown that wage policy moderation – combined with greater international diversification of production and the labour market reforms

<sup>13</sup> See "The euro area's economy: Beggar thy neighbour", *The Economist*, 27 January 2007, p 65 f, and J Creel and J Le Cacheux, *La nouvelle désinflation compétitive européenne*, *Revue de l'OFCE*, July 2006, pp 9-36, as well as O Blanchard, *A macroeconomic survey of Europe*, MIT, mimeo, <http://econ-www.mit.edu/faculty>, September 2006, p 6.

<sup>14</sup> See Deutsche Bundesbank, *Upturn with a bright outlook*, *Monthly Report*, February 2007, pp 40-41.

<sup>15</sup> See O Blanchard, *Adjustment within the euro area. The difficult case of Portugal*, mimeo, <http://econ-www.mit.edu/faculty>, November 2006, p 24.