INTERNATIONAL POLICY ANALYSIS

Germany’s Economy

Domestic Laggard and Export Miracle

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- At first sight, Germany’s economy has benefited from globalisation in general and from the global recovery since 2010 in particular. It offers a range of products, capital and luxury goods for which, thanks to the inequality of global growth, demand abroad is strong. Germany has internationalised its production processes, as a result of which it has a strong and relatively large industrial sector, but a relatively small service sector.

- On closer examination, a number of problematic developments can be discerned in Germany. For example, because of its strong dependency on its export industry the German economy is extremely prone to crises abroad. At around minus 5 per cent the collapse of growth in Germany in 2009 was among the worst, by international comparison. Although unemployment increased only moderately this concealed a massive fall in hours worked.

- In a longer-term perspective, too, Germany’s growth and employment dynamic has been disappointing by international comparison. Unemployment in Germany was high for a considerable period. Thanks to the advance of financial market capitalism and a labour market policy that promotes precarious employment, real wages stagnated. Inequality of income and wealth increased more rapidly than in almost any other OECD country. Opportunities for economic and social mobility have deteriorated and the risk of poverty has risen. These serious social problems threaten not only further economic development, but also social cohesion.

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Introduction[1]

Germany, as it is now, is the result of the German (re-) unification of 1990. The unification merged West Germany (the Federal Republic of Germany) and East Germany (the former German Democratic Republic). While the former was a successful capitalist economy with a developed welfare state, the latter was a socialist planned economy with relatively low income and productivity levels and strongly dependent on other socialist countries. The East German economy collapsed due to an overvalued exchange rate when it adopted West Germany's deutschmark (DM), a rapid rise in wages beyond productivity and the disruption of traditional trade flows. In due course, West Germany had to finance about half of the consumption in East Germany – about 100 billion euros a year or 8 per cent of GDP – through transfer payments, thereby putting a heavy burden on the social security system.

The second historic change was the establishment of the European Monetary Union (EMU) and the introduction of the euro in 1999 (with notes and coins being introduced in 2002). As a result, Germany lost control of its monetary policy and was subject to an interest rate chosen by the European Central Bank (ECB). Some economists argued that Germany had entered the EMU at an overvalued exchange rate (1.96 DM/€) resulting in a loss of competitiveness.

1. General Macroeconomic Overview

Unification led to a short period of relatively high growth due to a construction boom and high budget deficits, which increased public debt from about 40 per cent of GDP in 1992 to 60 per cent of GDP in 1997. West Germany's export surplus of about 5 per cent of GDP before unification vanished completely, giving rise to a wave of German »*Angst*« about its supposed loss of international competitiveness. This was the inheritance the red-green (SPD+Greens) government took over in 1998. As already mentioned, the euro seemed to exacerbate these problems.

1.1 Past Development of the Key Macroeconomic Indicators

The years between 1998 and 2005 were characterised by slow growth – with the exception of the short dotcom boom in 2000 – leading to high and persistent unemployment of approximately 10 per cent and budget deficits of about 3 per cent. Inflation was low and, due to the weak growth and wage restraint, lower than in the countries of the Eurozone. Net exports were the most important driver of growth, while domestic demand – in particular investment, but also private consumption – stagnated. The government wanted to reduce its deficit not at least in order to comply with the so-called Maastricht criteria of the European Stability and Growth Pact which requires public deficits lower than 3 per cent of GDP and public debt lower than 60 per cent of GDP. The austerity policy adopted during the recession possibly prolonged the weak growth and high unemployment.

During this phase (until 2005), Germany was widely considered the sick man of Europe, an economic laggard. It received little foreign direct investment (with the exception of Vodafone's huge takeover of Mannesmann). These perceptions were even more dominant within Germany than abroad. The mainstream of German economists, the media and most think tanks, in particular those close to business, advocated a major reform of the German labour market and welfare state or else Germany would turn into a uncompetitive basket case. Although many of the arguments presented were dubious – Germany showed export surpluses despite the assumed weak international competitiveness – politics eventually followed the dominant rhetoric.

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[1] This paper was originally written for and presented to the FES Regional Forum on »The Economy of Tomorrow« in Bangkok, Thailand, 1–2 March 2012.

In 2002–2004, the government (SPD/Greens) introduced several reforms, including a number of labour market reforms (Hartz IV) and an increase in the retirement age from 65 to 67. The reforms encountered substantial opposition, in particular from trade unions, but went through nonetheless. However, the voters punished the SPD, which lost its majority in 2005, receiving only 23 per cent of the vote in 2009 (down from 40.5 per cent in 1998). The labour market reforms contributed to substantial change in Germany. The low wage sector and wage dispersion increased massively. The share of wages in GDP, already in decline, decreased further. However, the intended effects of lower unemployment and higher growth did not materialise in the short term.

The main effect has been a substantial rise in German price competitiveness and exports. Germany's export surplus increased to about 5 per cent of GDP. After the long period of meagre investment private enterprises again started to invest, albeit modestly. Together with the rise of export demand this led to higher growth and a slow decline in unemployment. The new government, a grand coalition of CDU/CSU and SPD (with Angela Merkel as chancellor) raised VAT by 3 percentage points without negative effects on growth (which many had feared). In the end, by 2007/2008, Germany was – from a macroeconomic standpoint – in quite good shape: growth was recovering, unemployment declining, inflation was below 2 per cent and the budget was approaching balance.

The major drawbacks were the rising inequality, combined with a high savings rate. As these savings were only partly invested at home a large part flowed abroad. The capital outflow mirrored the export surpluses. Both resulted basically from the same cause: unequal distribution of value added between labour and capital. While workers and those dependent on social benefits (pensions and so on) faced stagnating or declining real incomes, enterprises and the rich enjoyed incomes that rose faster than their intentions to invest or consume. Lower wages and increasing productivity resulted in lower unit labour costs. The resulting capital outflows and export surpluses built up Germany's net foreign investment position.

These features of the German growth model contributed to the global financial crisis and the subsequent euro-crisis. Germany (together with other surplus countries) created the imbalances that fuelled capital markets with savings in search of higher returns. While its own asset markets (notably the housing market) remained fairly stagnant, its savers and banks wanted to benefit from rising asset prices abroad. When the crisis hit in September 2008, Germany first considered itself only marginally affected. Reality turned out to be different.

In due course and somewhat reluctantly Germany joined the other governments by adopting anti-crisis policies to rescue banks and stimulate demand. Two programmes were particularly successful: a working-time reduction with wage compensation in industries/enterprises affected by the crisis, and a »cash for clunkers« (scrappage) subsidy of several billion euros to replace old cars with new ones. In the end, Germany probably benefitted most from the efforts of other countries to stimulate demand through loose monetary and fiscal policies.

Germany's GDP declined severely – by more than 5 per cent – in 2009. This decline was deeper than in many other countries which had had bigger asset bubbles because the German economy was (and still is) dependent on exports. With world trade declining so did the German export machine. Indirectly, the German economy suffered from a credit crunch when major banks became basically insolvent and remained operative thanks only to government bail-outs.

Although its GDP had declined so deeply, the recovery in 2010/11 was equally strong, resulting in a V-shaped recession. By the end of 2011, Germany was more or less back on the growth path it had followed since 2005. Thanks to the ingenious corporatist working time management involving government, trade unions, works councils and employers, Germany was the only major economy where unemployment decreased rather than increased during the crisis.

1.2 Present Macroeconomic Problems

By 2011, Germany was considered an economic miracle once again. It seemed to have overcome the crisis relatively unscathed. GDP had recovered, employment was buoyant. The public debt was significantly higher than before the crisis (about 83 per cent of GDP in 2010 in comparison to 64 per cent in 2007), but remains well below levels in other euro-countries or the United States and under control thanks to rising tax revenues. Problems are arising less from within the German economy than from abroad.

The major challenge is the crisis of the Eurozone. Most Eurozone countries increased their government debt massively during the financial crisis, partly by bailing out banks (Ireland), partly by stimulating the economy and compensating for private deleveraging, and partly due to the automatic stabilisers (shrinking tax revenues, increasing expenditures on unemployment benefits and so on). In the end, the average ratio of public debt to GDP in the Eurozone increased by about 20 percentage points. When Greece had to admit in 2010 that it had fiddled its accounts and that its debt and deficits were actually higher than previously stated creditors panicked. First Greece and then Ireland and Portugal needed public support via loans from EU governments, the EU, the IMF and/or the newly established EFSF (European Financial Stability Fund).

Since 2010, the crisis has broadened and deepened. It has spread to more countries, such as Spain and Italy, and now threatens even the credit rating of French and German government debt. Debt levels have increased further despite massive austerity measures adopted by debtor governments. Germany has been the main culprit with regard to this disastrous development. It has refused to authorise the ECB to intervene more in the government bond market and to share mutual responsibility for all Eurozone government debt (for example, via »eurobonds«). The crisis of confidence in the financial markets has affected the banks and the real economy, too. Banks no longer trust other banks – like after the Lehmann collapse – because they have large exposures to Eurozone government bonds. Some debtor countries live in fear of bank runs. The ECB and the national central banks are financing current account deficits and capital flight from debtor countries via Target2accounts (the clearing system of the EMU).

With the Eurozone rapidly approaching recession or even an all-out crisis if a government – possibly Greece – goes bankrupt and/or leaves the Eurozone, Germany's unchanged growth model is in danger. Germany continues to preserve its competitive edge through wage and fiscal restraint at the expense of the deficit countries. But competitiveness cannot guarantee demand when the buyers are forced to deleverage. German stock markets reacted accordingly to each turn of the political process between Brussels, Berlin, Paris and Athens. With each concession of the reluctant German government, the DAX leaped upward. With each proof that minor concessions and half measures cannot pacify markets the DAX collapsed.

Germany's exports make up almost 40 per cent of its GDP. A large share (about 70 per cent) goes to Europe and in particular to the Eurozone (about 40 per cent). China absorbs less than 5 per cent of German exports, albeit with high growth rates. A recession in Europe, possibly spreading to the United States and eventually to emerging markets would bring about a recession in Germany, too. The crisis of 2008 has shown how much Germany depends on world trade. Germany must take a responsibility for the financial stability of Europe (and the world) commensurate with its role in trade.

A new financial crisis triggered by sovereign default will also harm the value of German savings. Germany has confused prosperity with financial wealth. Accumulated savings in the form of foreign investment represent real wealth only to the extent that foreign debtors are able and willing to honour their liabilities.

1.3 Likely Future Developments

The development of the German economy largely depends on the outcome of the euro-crisis. If Europe and Germany can overcome the crisis the German economy might continue with its export-led growth model. But this scenario implies a readiness to finance the deficits of the debtor countries in a sustainable way, transforming the EU into a fiscal and transfer union. Up to now, the German government under Angela Merkel has opposed such a solution, which in any case would not enjoy much support among German voters.

On the other hand, a collapse of the Eurozone, possibly accompanied by a global financial crisis, would push Germany into another recession which would probably be more severe than the one of 2009, as three of the relevant cushioning processes are much more difficult to achieve: first, Keynesian government deficit spending would have to start from an already high level of public debt; second, interest rates cannot fall much further; and third, short-time working cannot again rely on the reduction of accumulated overtime accounts but would need much more public income support.

The long-term stability and growth of the European and global economy (on which Germany's prosperity relies) would be better served if Germany adopted a new growth model based on domestic demand rather than on export surpluses. Such an expansion of domestic consumption would require higher wage growth, more equitable distribution of income and more government spending, in particular on social services, such as education and care. A better education system which would correct the class bias of the present system and increase productivity and employability. The resulting growth would finance the additional outlays.

2. Income Distribution, Consumption Demand and Sustainable Development

As mentioned in Section 1, Germany has become a much more unequal society during the past two decades. The only positive side has been the reduction of income differentials between East and West Germany. The more unequal distribution of income and wealth has led to weak domestic demand and thus slower growth.

2.1 Past Development of Income Distribution

West Germany used to be (in 1985) one of the more equal capitalist societies, with a Gini coefficient of 0.25. By 2007, this value had increased to 0.3. To illustrate this change, the current income distribution in Germany resembles that of Italy in 1985, while in 1985 it was similar to that of Norway today. Behind this overall picture one should look at developments in western and eastern Germany. Thanks to its socialist past eastern Germany's income inequality was relatively low in 1991 but increased rapidly thereafter. By 1995 the primary distribution – that is, market income before redistribution by taxes and transfer payments – had become more unequal than in western Germany. While the average per capita income in eastern Germany slowly approached the western German level, inequality increased in both parts of the country.

There are various dimensions of income inequality in Germany. Average per capita income differs widely from region to region. The Länder with the highest average income are the city states of Hamburg and Bremen and the states in the south-west (Bavaria, Baden-Württemberg). Functional distribution between capital and labour has changed dramatically: the share of wages declined from 73 per cent in 1993 to 64 per cent of GDP in 2006. It recovered slightly and temporarily during the deep recession when profits collapsed faster than wages declined. But in 2010 the old trend reappeared. Income differentials among wage earners increased strongly from 0.41 to 0.46 (Gini coefficient) reflecting the rise of the low wage sector and above average increases of earnings among the already rich (for example, CEOs). The low wage sector expanded from 15 per cent in 1995 to 22.2 per cent in 2006, with low wages defined as less than two-thirds of the median wage. Women are still discriminated against in the labour market earning 22 per cent less on average than men. Since workers are in general poorer than self-employed people or employers, the changing functional distribution has led to a less equal personal distribution.

On balance, over the past decade Germany has exhibited one of the strongest increases in inequality among the OECD countries. The causes are both political and economic. The political causes are the labour market reforms and the general pressure on wages under the aegis of competitiveness. But these political trends, attitudes and decisions reflect other, more fundamental trends. To name but three:

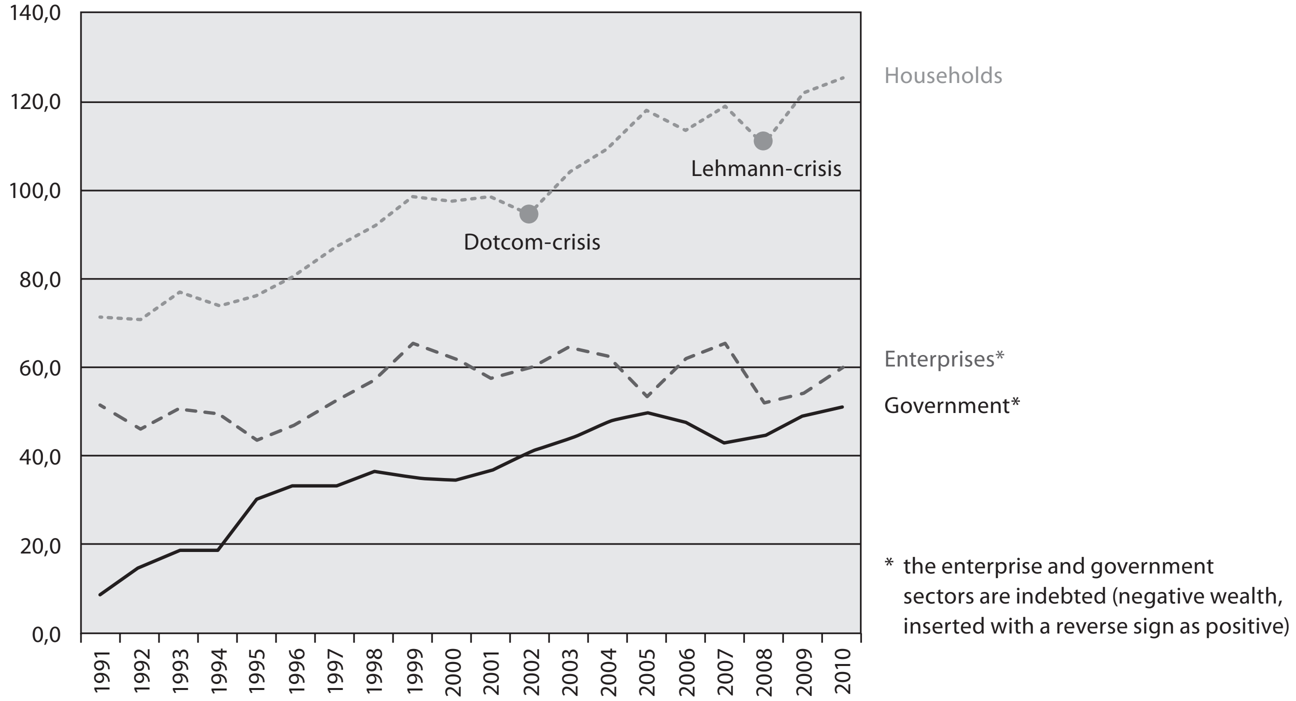
(i) Globalisation which exposed the German tradables sector to competition from low wage locations. This trend made itself felt in the form of competition for investment locations rather than in terms of imports. German employers shifted or threatened to shift certain production stages to low cost locations. A typical example was the closure of a Nokia factory in Bochum which was relocated to Romania (which has also now been closed).

(ii) Technology which substituted unqualified labour to some extent (or again served as a threat to quell employees' wage demands).

(iii) Decline of union density which has been particularly rapid and broad in eastern Germany due to its deindustrialisation and high unemployment.

Poverty has also increased. In Germany, poverty is measured by the poverty risk ratio, which gives the share of households on 60 per cent or less of the median net equivalent income (a fictional income adjusted for house-

Figure 1: Net monetary wealth (percentage of GDP, 1991-2010)



* the enterprise and government sectors are indebted (negative wealth, inserted with a reverse sign as positive)

hold size). These values have increased (indicating a higher risk of poverty) from about 10 per cent during the 1990s to almost 15 per cent in the late 2000s. The rise was particularly strong in eastern Germany where it grew from 13 per cent in 1998 (the lowest value between 1992 and 2009) to a peak of 23 per cent in 2006 (declining to about 20 per cent thereafter).

The flipside of all this is the distribution of wealth. The richest decile (10 per cent) of the population owned 57.9 per cent of the net assets in 2002; by 2007 their share had increased to 61.1 per cent. The average wealth within this group increased from 208,483 euros to 222,295 euros. The poorest decile had only debts. As Figure 1 shows, monetary wealth (excluding property, plant, equipment and so on) increased much faster than GDP, climbing from 70 per cent of GDP to 125 per cent. This almost inevitably leads to a higher share of income for the wealth owners who expect a »decent« return on their investments. Those investments are less and less made in the private corporate sector, however. Its debt increased much more slowly, from around 50 per cent of GDP to about 60 per cent. The state replaced the corporate sector as the major recipient of household savings, increasing its share from 10 per cent to 50 per cent of GDP. Ultimately, the rich expect the state to extract their interest income from the population rather than from the corporate sector.

2.2 Present Debate about Policies to Change Income Distribution

For a long period, the Okun view on equity and efficiency prevailed. Inequality was considered a recipe for growth while equality was supposed to cause stagnation and decline. Taxing the rich was seen as a disincentive to the creation of wealth and jobs. The famous saying by J.K. Galbraith[2] “The rich are not working hard enough because they are not being paid enough, while the poor are not working hard enough because they are being paid too much." applied perfectly to the German debate. The root causes of unemployment were seen as wages exceeding productivity and the tax wedge (difference between gross and net wages). These economic ideas dominated the German debate and influenced policy design, leading to the rise in inequality described above.

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[2] Quoted from Palley, Thomas (1998): Plenty of Nothing. The Downsizing of the American Dream and the Case for Structural Keynesianism, Princeton, p.132.

From the mid-2000s, however, the debate shifted as concerns about the rising inequality increased while concerns about slow growth receded. A general legal minimum wage has become the core demand from the left. After some initial reluctance because of its effects on autonomy in wage bargaining, the unions joined the campaign for minimum wages. Economists on both sides reasoned both in favour of and against minimum wages. The neoclassical mainstream argued that it would destroy millions of jobs and prevent the young and less qualified from getting one in the first place. Keynesian economists stressed that wages fuel demand, which in turn leads to growth and more employment. Both sides used (different) econometric models to »prove« their point.

The proponents of a minimum wage gained the upper hand when new academic studies from the United States and eventually (in 2011) even an official study commissioned by the conservative German labour minister supported their view. Meanwhile, minimum wages have been introduced in a series of industries, such as construction and cleaning. Even the ruling conservative party tends to favour minimum wages now, albeit not a uniform one, but minimum wages differentiated by region and industry and determined by wage councils in which employers and unions are represented.

Besides the minimum wage debate (which concerns primary distribution), there is a debate on the extent and modalities of redistribution. Redistribution in Germany works through two channels: taxes to some extent finance transfers (there is, for instance, a large subsidy to the pension system from the federal budget), which benefit primarily the needy, and public goods, which benefit everybody. Pensions, sickness and unemployment benefits, and health services are financed mostly by contributions, which are a fixed share of income up to a threshold. The social insurance system is thus less progressive than the income tax system. Since cash benefits are often proportional to the level of the replaced market income the poor in effect get lower payments than the richer contributors.

Nonetheless, the secondary distribution of income (after taxes and transfers) is much more equal than the primary distribution of market income. Conservative economists like to point out two facts: first, the richest 10 per cent of taxpayers contribute more than 50 per cent of income tax; second, the ratio of the income share of the second poorest decile to the second richest remained a stable 1:2.7 after redistribution, although the ratio before redistribution had worsened from 1:19 to 1:28 between 1993 and 2003. Therefore Germany seems still to be a very »social« country despite increasing inequality. The message inferred is: let the markets determine income – so that untrammelled growth can follow – and the welfare state will correct the rest.

A closer look reveals a bleaker picture. If one considers total tax revenue and not only income tax, the share of the rich declines strongly. In the long run, the share of taxes on wealth (the wealth tax proper was suspended in the 1990s) and corporate profits has declined substantially (from 34.07 per cent in 1960 to 24.9 per cent in 1980 and 19.5 per cent in 2010), while the share of taxes on wages and sales which affect the poorer strata increased (from 37.5 per cent in 1960 to 62.0 per cent in 1980 and 71.4 per cent in 2010). There have been some efforts to reduce the tax burden for people on low incomes. In fact, the net tax payments (after deducting child benefits) of a family of four start only with an income of about 30,000 euros a year. A further improvement of the redistribution system must thus focus on a progressive system of social security contributions rather than more tax relief. The apparently dramatic improvement in income ratios between poorer and richer deciles is basically a mathematical phenomenon. If one takes a quarter of the income of the richer group and gives it to a poorer group of the same size, the resulting ratio is always about 1:3, almost regardless of the original distribution. To give an example: let the original ratio be very high, say 1:100; after taking away 25 from the rich and transferring it to the poor, one ends up with a new ratio of 26:75, about 1:3.

2.3 Likely Future Development

Given the present trend, it seems likely that the worsening of the income distribution will continue, albeit at a slower rate due to the introduction of a minimum wage. As all major political forces now support such a policy it should become reality by 2013. The question is less whether there will be minimum wages or not but what shape they will take. It could be a more differentiated pattern governed by unions, employers and state or a uniform legal minimum wage whose level is determined by a similar institution or directly by the federal government, subject to parliamentary approval.

Tax policy should become somewhat more redistributive, charging the very rich a higher rate and better international supervision of tax evasion (there is, for instance, a new treaty in the making between Germany and Switzerland which regulates the taxation of German wealth in Swiss banks). But the opportunities to evade tax will grow, too. The rich will be able to exploit legal loopholes, international competition between indebted states and offshore tax havens.

A bigger long-term problem is the pension system. The pay-as-you-go (PAYG) system, which is the first and most important pillar of the German system, will experience difficulties due to demographic change. Fewer and fewer contribution-paying workers have to support more and more pensioners as the population declines and life expectancy grows. Some economists see this as »implicit government debt« (added to the explicit debt). The figures given for that debt are horrifying, doubling or tripling the explicit debt. But they in fact represent the net present value of future pension payments uncovered by existing contribution rates, which indicates that policies have to change in one or more of the following three ways: lower benefits, earlier retirement age or higher contributions. Germany has primarily adopted the first two policies and tried to avoid the third because it is assumed that higher non-wage labour costs harm international competitiveness and employment. As a consequence, one can expect a higher share of poor pensioners in the future: the earlier retirement age (gradually increasing to 67) will reduce pensions because older people will not be able to find or keep jobs until that age.

3. World Market Strategy and Protection from External Shocks

Germany was »world export champion« for many years until it was finally outpaced by China in 2009. This illustrates the surprisingly strong export performance of the German economy. But it also indicates an exceptional vulnerability to global changes. However, it is questionable whether one can speak of a German world market strategy. There certainly is a widespread concern – if not obsession – with international competitiveness. But there is no strategic actor, rather a more or less common effort by state, corporate sector and unions. German enterprises have world market strategies, partly supported and partly opposed by German trade unions. The German government has often adopted policies to ensure competitiveness, usually by lowering labour costs and supporting innovation (public spending on R&D).

3.1 Past Integration into the World Market

Germany is highly integrated in the world economy. For a country of its size (population 82 million; GDP 2.4 trillion euros in 2010) its share of foreign trade is very high. Exports are valued at almost 1 trillion euros, or about 38 per cent of GDP. Imports are somewhat lower but still about 32 per cent, leading to a trade surplus of about 150 billion euros or 6 per cent of GDP. This surplus is to some extent reduced by a deficit in services, in particular tourism (Germany has a negative balance on tourism of about 1.5 per cent of GDP). The capital account is, as it must be, the mirror image of the current account, making Germany a net capital exporter with a growing net investment position as a global creditor. Germany exports capital in various forms, such as transfers – for example, aid or contributions to the EU – foreign direct investment and lending (buying financial products or government bonds). Germany also imports labour, albeit at a much lower level than in the 1960s. There are currently almost 2 million foreigners employed in Germany.

In 2010, Germany exported over 70 per cent of its exports to Europe (60 per cent to the EU, the rest to Switzerland, Norway and so on). The biggest importers within the EU have been France (9.4 per cent), the Netherlands (6.6 per cent), the United Kingdom (6.2 per cent), Italy (6.1 per cent), Austria (5.6 per cent) and Belgium/Luxemburg (5.4 per cent). China is at about the same level as Austria. However, exports to China have by far the highest growth rate (about 16 per cent per year between 1990 and 2010). Export growth has also been particularly strong to Poland, the Czech Republic and Slovakia.

The regional structure of imports matches that of exports to a large extent. Again, almost 70 per cent of all imports come from Europe (56.7 per cent from the EU). The German export surplus results largely from its trade within Europe (plus the United States). Oil-exporting countries and China export more to Germany than they import from it. Within Europe, Hungary, the Czech Republic and Slovakia also run bilateral trade surpluses. These surpluses are generated primarily by intra-firm trade in the automotive industry, as Germany imports cars or car parts from subsidiaries of German car producers there.

The industry structure of German exports shows strong positions for machinery, electrical machinery, equipment and cars. Germany's share of the world market in industries such as machinery, electro-technical goods, chemicals, pharmaceuticals, cars and lorries, planes, iron and steel are between 6 per cent and 10 per cent (Germany's share of world GDP is less than 5 per cent). The share of other industries has declined since 1995: furniture from 16 per cent to 9 per cent; clothing from 14 per cent to 10 per cent. With this pattern, Germany's industry has been well placed to benefit from the unequal growth of the world economy. Growth spurred demand for investment goods, inequality demand for luxury cars.

German imports consist mainly (60 per cent) of manufactured goods, too. This pattern indicates the major importance of intra-industry trade. Nonetheless, the comparative advantage of the German economy is revealed by the composition of imports relative to exports. Raw materials and food make up 10 per cent and 9 per cent, respectively, of all imports, while their share of exports is much smaller (1 per cent and 6 per cent). Similarly, the import share of cars and machinery is lower, at 5 per cent and 9 per cent (against 10 per cent and 15 per cent of exports).

Germany's integration in global factor markets for capital and labour is somewhat less pronounced than its trade performance. Germany is not a major target country for foreign direct investment (FDI). Usually its investments abroad are much higher than foreign investments in Germany. An exception was the year 2000 when Vodafone bought the mobile phone business of Mannesmann during the dot.com bubble. In 2000, Germany received FDI of 215 billion euros while exporting 61 billion euros. In most years, incoming FDI does not exceed 50 billion euros and is thus lower than outgoing FDI. German FDI often goes to Central and Eastern Europe establishing production networks.

As a net exporter of goods and services, Germany has to be a net exporter of capital, too. Nonetheless, it receives substantial inflows of portfolio investment which are overcompensated by strong outflows. Foreigners like to buy German government bonds and hold a substantial part (about 40 per cent) of Germany's public debt (about 2 billion euros or more than 80 per cent of GDP). Overall, Germany is a net creditor to the rest of the world. In 2010, German banks had claims against foreign debtors of 2.4 billion euros (= 100 per cent of GDP), one-third of which was owned by foreign banks, about half by enterprises and the remainder by governments. Financial wealth was hit by the financial crisis in 2009 but mostly recovered in 2010. It remains to be seen how the government debt crisis will affect the value of German claims/assets.

During the post-war economic miracle (»*Wirtschaftswunder*«) Germany hired many foreigners – originally from Italy, Greece and the former Yugoslavia, later to a large extent from Turkey. After the first oil shock, the government tried to stop the inflow. But it continued because of family privileges (wives and children were allowed to immigrate). In the 1990s, many ethnic Germans were allowed or even incentivised to immigrate to Germany. About 1 million »returned« from the former Soviet Union. Immigration from Central Eastern Europe (Poland in particular) has long been blocked and was temporarily permitted but only for seasonal work (harvesting asparagus and so on). Since 2011, immigration has been free as the seven-year grace period after these countries' entry to the EU ended and the free movement of labour within the Single Market applies. Meanwhile, many immigrants of the first generation and/or their children have become German citizens. »True« foreigners still make up about 6 per cent of the labour force.

Germany's international integration works not only through markets but also through institutions. Germany is a member of many global bodies which manage the global economic governance (WTO, IMF, World Bank). Much more important is Germany's membership of the EU which constrains Germany's economic policy in various aspects. There is no sovereign national monetary and exchange rate policy as this is the prerogative of the ECB; fiscal policy is supposed to follow European rules regarding deficits and debts; there is no national trade policy as tariffs and so on are set at EU level by Brussels; subsidies are subject to approval by the EU Commission. Many other policy fields are coordinated and/or subject to majority rule within the EU. This integration has immediate economic and financial repercussions: Germany is the largest net contributor to the EU budget, a »shareholder« of the ECB and, as the crisis unfolds, a major contributor and guarantor of the diverse funds and schemes to »save the Euro« (better: to disarm the financial bomb possibly triggered by a panic in the capital markets).

3.2 Present Debate about Germany's World Market Integration

Generally, export pride, on the one hand, and concerns about a supposedly declining international competitiveness, on the other, have dominated economic policy discourse in Germany since the late 1970s. This strong hegemony has been challenged by some left-leaning economists and politicians, albeit without much effect. More recently, two developments have fed the scepticism about the wisdom of Germany's export-led model.

(i) The first is the crisis in the Eurozone which is, at least partly, fuelled by the growing trade imbalances. While Germany runs large surpluses, other countries, such as Greece, Spain, Italy and France, have corresponding deficits. These imbalances are caused by a divergence of unit labour costs which have declined in Germany and increased strongly in the southern member states. In 2009, the then French finance minister Christine Lagarde voiced her concerns about Germany's beggar-thy-neighbour policies and so triggered a fierce debate in Germany which continues as the crisis develops.

(ii) The second is rising inequality within Germany. Besides being a problem in itself it is closely linked to Germany's manner of world market integration. On the one hand, wage restraint, labour market reforms and welfare cuts have often been justified in the name of international competitiveness. Globalisation and maintaining a strong economy in a globalised world allegedly required a leaner welfare state and lower wages. On the other hand, inequality and poverty continued to grow even when the economy picked up in the wake of rising exports.

In both regards critical analysts (often close to trade unions) have pointed out that the two problems are intertwined and that the solution is higher wage growth in Germany in accordance with long-term productivity growth and the ECB's target inflation rate of 2 per cent. Such a development would correct the divergence of unit labour costs in the Eurozone and help Germany's trade partners to regain competitiveness. It would also improve income distribution in Germany and cause higher growth of domestic consumption. This, in turn, should increase German imports, reduce the current account surplus and even increase investment as enterprises expand capacity to supply the increased domestic demand.

The advocates of the traditional export-led growth model like to stress that Germany's recent growth is caused by exports and »if it ain't broke, don't fix it«. Regarding Europe, they argue that Germany's strong exports help to balance the Eurozone's external accounts given the weaker members' import surpluses. The rise of emerging economies, in particular China and India, is considered a threat to Europe's and Germany's prosperity, which can be saved only by a strong focus on competitiveness. As one prominent German economist (Christoph Schmidt, a member of the government's economic advisory board) put it: »We cannot pull ourselves out of the morass«, implying that growth can result only from exports (surpluses). On that basis, the world economy could grow only if it could export to, say, Mars.

In this context, there is another current of the public debate on the value of manufacturing vs. services. To quote a former chairman of the German Federation of Industry, Olaf Henkel: »We cannot survive in the long run by just cutting each other's hair.« While it is evident that an economy needs more than services this position assumes that only industry creates value and that the rest of the economy lives at the expense of the manufacturing sector. It is reminiscent of Marx' theory of productive labour, in which only industrial workers produce value, while trade, banking and so on are »unproductive«. The differentiation between productive and unproductive labour goes back to the Physiocrats (Quesnay, 1694–1774) who considered only agriculture as productive and even handicrafts and manufacturing as unproductive. In both theories, the demand for the output of the unproductive sectors comes from the exploiting classes (the capitalist bourgeois class in the case of Marx and the nobility and clergy in the case of the Physiocrats).

In Germany, there are similar suspicions regarding the service sector, in particular public services. The state is apparently considered an exploitative entity. The advocates of industry also feel that they were wrongfully criticised by Anglo-Saxon economists during the early 2000s. Some foreign observers blamed the German stagnation of that period on the prevalence of manufacturing and the weakness of (new) services, such as finance, which accounted for a large share of the higher growth in the United Kingdom and the United States. Many Germans felt that the crisis and post-crisis stagnation proved their scepticism with regard to services.

In the opposite camp, the proponents of »social growth« point out that manufacturing industry's share of employment and value added has declined continuously in Germany and that in future jobs will be created mainly in the service sector. An expansion of domestic services such as education, health and care is welcome and likely to increase prosperity and productivity.

3.3 Likely Future Developments

Changes in Germany's growth model will be triggered by external challenges rather than domestic reforms. Among the former, a deepening of the euro-crisis and a decline of emerging market growth are more important as both will harm the prospects of German export industries. Among the latter, the introduction of a legal minimum wage and higher taxation of wealthier households might improve the income distribution and lead to higher imports and/or demand for consumption goods and services.

The crucial point remains the euro-crisis. Germany is largely responsible for the duration and depth of the crisis. If the German government had endorsed mutual responsibility of all Eurozone governments, a common European bond (eurobond) and an active role for the ECB in the bond markets and as lender of last resort, the crisis would have ended immediately in May 2009. Germany's reluctance to save Greece and other highly indebted euro-countries (Ireland, Portugal and Spain) increased the panic of the financial markets and thus the cost of any further rescue package. Germany's (as well as the EU's and the IMF's) insistence on austerity policies in the GIPS countries exacerbated the crisis. The ensuing recession there reduced their capacity to service their debt and increased the crucial debt/GDP ratio (by lowering the denominator).

Recession or even depression now loom in the Eurozone. In late autumn 2011, a new banking crisis similar to the Lehmann crisis of 2008 threatened to happen. The banks which have relied on government bonds as collateral were close to losing their creditworthiness. Rating agencies downgraded first Eurozone states and then Eurozone banks. A crisis could be averted only by massive injections of liquidity by the ECB and other central banks. The corporate sector and households are affected by the credit crunch. Growth forecasts for the EU and for the global economy have been revised downwards. For an export junky such as Germany this forebodes a painful decline in sales.

4. Green New Deal and Environmental Problems

Germany has a long tradition of environmental movements and policies. Already 50 years ago, in 1961, Willy Brandt (then leader of the SPD) asked for a »blue sky over the Ruhr«. At that time, the Ruhr was the industrial heartland of West Germany with a strong concentration of highly polluting heavy industries, such as coal and steel. Pollution was initially environmentalists' primary concern. During the oil crises of 1973 and 1980 the scarcity of natural resources became an important concern, which lost its prominence when real oil prices declined and remained low for many years. Later opposition to nuclear power became the focus of the environmental movement which contributed to the rise of the Green Party in the 1980s. Since the 1990s, global warming and climate policy have shaped the debate. Most recently, the depletion of natural resources has gained more attention, again due to rising prices. The nuclear catastrophe in Fukujima, Japan, in March 2011 changed Germany's nuclear power policy radically. Together, these three challenges have led to renewed efforts to save energy and switch to renewable energy.

4.1 Overview of Environmental Problems

One can differentiate four dimensions of environmental problems, the first two more local or regional, the second two more global:

(i) **Pollution** creates (negative) external effects, indicating a classic market failure. Enterprises and households can reduce costs by externalising them when they do not clean up their emissions into the air, water or land. Politically, pollution is still relatively easy to deal with as its effects are often felt more or less directly in the environment of the same enterprises or households. In fact, Germany, often together with its neighbouring countries, has made substantial progress over the past 50 years. Highly polluted rivers have been cleaned by much better waste water management (you can swim in the Rhine nowadays). The sky is indeed now blue over the Ruhr. Garbage treatment has been optimised, providing more recycling. HCFC emissions have been reduced. German forests, which some people in the 1980s expected to be gone by now, are recovering. Emissions of CO_2 have declined since 1990/91 from over 1 billion t to about 850 million t in 2008 and, due to the crisis, 789 million t in 2009. The energy industry produces over 40 per cent of it, while transport, households and other industries have similar shares of about 18 per cent each. In East Germany, the socialist planned economy had focussed even more on cheap growth than the capitalist West. After its collapse, it left a legacy of heavy pollution, which has been cleaned up since. Less pollution (including less emission of CO_2) has been not only the result of stricter regulation and better policies but also, and arguably to a larger extent, of deindustrialisation. In the case of East Germany this causal relationship is fairly obvious. But it is also true for the Ruhr area. In international negotiations and by international comparison Germany has benefitted from these windfall benefits of structural change. However, several forms of pollution remain to be dealt with. Noise is an issue that often leads to protests. Despite extensive construction of protective walls along motorways and railways (in particular high-speed railways) noise is still increasing in many ways due to increasing traffic. Close to airports, people are affected by and protesting against night flights. Respirable dust continues to be a problem in city centres with lots of traffic. Emissions of greenhouse gases are still too high (see point iv). Some species are endangered, albeit by the destruction of their habitats in the course of constructing houses and roads rather than by pollution.

(ii) **Nuclear power** provided about a quarter of Germany's electricity in 2009. Because of widespread protests against nuclear power plants (in particular after the Chernobyl catastrophe in 1986) and, even more important, the transport and storage of nuclear waste there was no further expansion of nuclear power production in Germany. The SPD/Green government decided in 2000 to end nuclear power production by 2020. In 2010, the conservative/liberal government prolonged the running times of most power plants. This decision was again revised in the wake of the Fukujima catastrophe in 2011. The eight oldest power plants were closed down immediately.

The biggest environmental problems now result from the long-term storage of nuclear waste, including the treatment of the decommissioned power plants. No present storage facilities are completely safe. Some have had leakage problems. People in their neighbourhood and often local and regional democratic representations are opposed to the maintenance or new establishment of storage facilities.

(iii) The **depletion of natural resources** leads – in combination with rising global demand – to higher prices. Thus market forces are unleashed which will provide incentives to save raw materials. Germany is highly dependent on imports for its raw materials (see Section 3.1). Rising prices imply declining terms of trade and a comparatively lower real national income. The primary concern in this context is obviously oil and gas which provide a large share (over 50 per cent) of Germany's energy. Households are affected as bills for heating, electricity and transport rise. Although there have been various measures such as eco-taxes on fuel to reduce consumption beyond the effects of rising market prices, actual consumption declined but slowly due to rebound effects (driving more with more fuel-efficient cars).

(iv) **Climate change** has arguably become the major environmental issue in Germany. It is difficult to determine whether it really is a problem for the country. To the extent that Germany does face climate-related problems it is hard to prove that global warming causes them. There have been some unusual periods of both drought and heavy rainfall (the latter causing floods). But one can always show that similar events also happened decades ago. It is rather the anticipation of possible disasters (rising sea levels, for instance) and the international commitment to reduce the emission of greenhouse gases that drive German efforts.

The common denominator of all four areas or types of environmental problem is energy. The traditional energy mix is responsible for most of the CO_2 emissions, and thus climate change. Although nuclear power is less harmful for the climate it carries other high risks, as the Chernobyl and Fukujima catastrophes have shown. Germany's – somewhat surprising – decision to stop using nuclear power exacerbates the pressure to change the country's energy supply. In the short run, more fossil energy and/or imported electricity based on nuclear power abroad will probably replace the loss of domestic nuclear power. For a real change it is necessary to expand the output of renewable energy in Germany and abroad. For the latter option a project to create solar-powered electricity in North Africa and import it from there has been proposed. The enterprises which administer the power grid have pointed out the difficulties involved in coping with the high volatility and unpredictability of supply from wind and solar sources. There is a fear that the grid will collapse during times of low supply of renewable energy and high demand (such as dark winter days without wind and with high consumption) leading even to blackouts. Such things might bring about a new shift in the political mood with regard to nuclear power.

The expansion of domestic output of renewable energy has also been promoted by a new law, the Renewable Energy Law (Erneuerbare Energien Gesetz or EEG), which subsidises the production of renewable energy by ordering energy corporations to buy it at a determined price. Of course, the cost has been translated into higher electricity prices to be paid by the final consumer. Other regulations demand better insulation of houses and buildings to save energy on heating and air conditioning. In line with these policies Germany has built thousands of windmills and solar panels. The output of electricity from these sources has increased massively. Windmills alone produced 37,793 GWh in 2010 (6.2 per cent of all electricity) up from 71 GWh (less than 0.01 per cent) in 1991. Other rapidly expanding sources have been photovoltaic production and biomass. The introduction of biogasoline (E 10) was enforced (oil firms will have to pay penalties if consumption does not exceed certain threshold values), but has not met with much favour among customers. Overall, the share of all types of renewable energy (including hydropower, whose output did not grow) increased from 3.8 per cent in 1995 to 10.3 per cent in 2009 (final consumption), and from 1.9 per cent to 8.9 per cent (consumption of primary energy), respectively.

4.2 Current Debate on Solving Environmental Problems

In order to assess the current debate in Germany, it is useful to differentiate between the abovementioned problem areas (nuclear power, pollution, depletion of natural resources, climate change).

The exit from nuclear power is based on a relatively broad national consensus. The remaining opponents are basically the affected energy corporations, which face a strong decline in revenues and the cost of decommissioning the power plants. However, it remains to be seen how the public mood will change when jobs are lost in the nuclear energy industry, energy prices soar or even blackouts occur. Critics of the exit like to point out that a huge capital stock in good (in other words, safe) conditions will be made useless while electricity will be bought from nuclear power plants in neighbouring countries (France, Czech Republic). Those power plants endanger Germany, too.

Pollution is mostly a local concern, often pitting local environmentalists against more general economic interests in, for example, the construction of larger infrastructure projects, such as Stuttgart's subterranean central railway station or Berlin's new airport. Consumer protection organisations and activists often raise issues of food safety. Some scandals have led to higher standards and stricter controls.

Regarding the depletion of natural resources, the strongest concern is rising prices. Consumers, including enterprises, which use them as inputs, complain and expect compensation, while environmentalists want to increase the pressure, for instance, by means of taxes in order to accelerate saving and substitution measures. The cost of raw materials is now more important than the cost of labour in several industries. Unions and environmentalists are therefore asking enterprises to focus more on resource productivity than on labour productivity as increases in the latter might destroy jobs.

The German debate on climate change reflects the global discourse to some extent. However, general denial of climate change or the role of human activities in causing it has been rather limited, compared to the United States. The German debate focuses instead on the question of how far Germany and Europe should reduce emissions unilaterally. Critics such as the prominent conservative German economist Hans-Werner Sinn fear that reductions of demand for oil and gas (or any other non-renewable natural resource) by Germany will lower world prices and thus increase demand by others. That higher global demand will offset any positive effects German efforts might have. Even worse, those other users might be able to underbid or outcompete German business, which would be burdened by the adjustment costs.

Again, the core German angst concerning a possible loss of international competitiveness strongly shapes the German debate. This paradigm is deeply engrained and serves business well in its efforts to protect its interests at the expense of wage earners or, in the present context, the planetary environment. Business and its think tanks and lobbyists love to use that argument to justify subsidies, exceptions from regulations or transitional regimes.

4.3 Strategy and Coherence of Industrial Policies in General

There are two major constraints on any industrial policy in Germany, one external, the other self-inflicted. Externally, the EU Treaty strongly limits national industrial policy competences. As many measures within the realm of industrial policy – for example, subsidies – distort trade in much the same way as tariffs or other non-tariff barriers, they are subject to monitoring and approval by Brussels. The greatest internal obstacle is the conviction of many German policymakers and economists that the structure of the economy should be shaped by market forces rather than by the state. The state should guarantee only the functioning of the market by, among other things, competition policy which is to prevent monopolies, oligopolies and other business practices from limiting competition. Nonetheless, there are industrial policies and a series of other policies which may affect the structure of the German economy. These policies, however, do not form a coherent and deliberate strategy. If there is a strategic »leitmotiv« of German economic policy, it is »international competitiveness«.

There are two dimensions to the preservation of international competitiveness. The first is cost reduction which has dominated German policy for a long time. Germany has almost always tried to pursue a policy of wage restraint and low inflation. The ensuing real devaluation of the national currency (until 1998 the DM) was compensated for by periodic nominal increases in the exchange rate (devaluations of the US dollar and other currencies vis-à-vis the DM). Within the Eurozone, the first process continued while the second had become impossible, leading to a stable and continuously reinforced competitive edge for the German export industry (see also Section 2 above). The second dimension is more dynamic and forward-looking and tries to preserve or create a structure of productive capacities that allows high domestic income growth without current account deficits or, in other words, strong exports at high prices.

The latter requires a regional and sectoral export structure focusing on high growth markets. To protect the sectoral pattern from low-cost competition, German production has to be of high quality. Spending on R&D, education and training, close cooperation between universities and business contribute to the strength of German industry. Most recently, green growth or the promotion of green industries has become the fashion in German industrial policy. Measures like the abovementioned EEG are just one of many public initiatives to support new industries with beneficial environmental effects, such as renewable energy production, energy saving, energy storage and transport. German environmentalists hope to combine the greening of Germany with the creation of jobs and the promotion of exports by turning Germany's industry into a global leader in these domains.

Generally, Germany and in particular the government spends too little on research and education compared to other countries. Both have suffered from austerity policies and short-term spending priorities in the state budget. Some reforms of the welfare state, which makes up a large part of the federal budget intended to free funds for more forward-looking activities. In the end, tax cuts ate up the gains made, at the expense of the poor (see Section 2), while education and research are still neglected.

This does not preclude the protection of certain declining industries. Agriculture is the most prominent protected sector whose development is managed on a European level by the Common Agricultural Policy with expenses of about 0.3 per cent of the EU's GDP. These expenses, which are supposed to help small farmers, have slowly declined as agricultural prices increased. Actually, the major recipients are big farms because fixed prices benefit low-cost producers most. Coal is another declining industry benefitting from subsidies. The phasing out of coal production in the Ruhr has been a cumbersome and expensive process, costing billions of euros/deutschmarks over the decades. The rationales given for these policies range from supply safety and job protection to the particular interests of capital and labour.

The great lacuna of German industrial policy is the services sector. Although this sector accounted for almost three-quarters of all employment (including self-employment) and about 70 per cent of value added in the German economy in 2010 there is no clear concept or strategy for its development. On the contrary, services are still often considered a burden on the »real« economy, in terms of manufacturing (see also Section 3.2). In many regards, the only policy directed towards the service sector has been a low-wage policy because it was assumed that demand for services would only grow when relative prices declined. In order to create more jobs in the only sector where employment could reasonably be expected to grow, labour markets were reformed, liberalised or deregulated to allow the creation of precarious jobs (see also Section 2). The flipside has been very low productivity growth (even negative between 2000 and 2005) in the service sector, which in turn was co-responsible for slow growth in the whole economy.

4.4 Likely Future Developments

The most likely development of the German economy is a continuation of present trends. Germany will try to remain the world's preeminent producer of high-quality equipment and cars. Access to export markets, if necessary by real devaluation, will remain a top priority. Saving on raw material and energy consumption fits that pattern as it reduces costs. Producing equipment and cars that use less energy also fits that pattern, as it increases the non-price competitiveness of German exports when customers face higher energy prices. Otherwise, Germany is likely to use the lack of global agreements as an excuse to undertake only modest efforts to reduce the emission of CO_2. A major renaissance of nuclear power cannot be completely ruled out, but remains highly unlikely.

A much better, but unfortunately less likely policy would be the adoption of a new growth model as proposed by FES within the framework of its »Social Growth« project. This growth model relies on the expansion of services such as education and health care for domestic consumption. Rising employment, in particular of women, and productivity, by investing in IT, intangible and human capital, would underpin that growth model on the real supply side. On the demand side, a stronger redistribution through the tax system and higher wages would ensure stable development of demand less reliant on debt. Moreover, social growth would be ecological, as services are much less energy-intensive than manufacturing. Such inward-looking growth would furthermore defuse the crisis in the Eurozone by correcting the current imbalances through higher imports and a reversal of real devaluation.

5. General Evaluation

At first sight, Germany's economy – especially its export economy – has benefited from globalisation. It offers a range of products, capital and luxury goods, for which, thanks to the inequality of global growth, demand abroad is strong. Germany has internationalised its production processes, the outcome of which is a – by international comparison – strong and relatively large industrial sector alongside a relatively small service sector.

On closer examination, however, a number of problematic developments can be discerned in Germany. For example, because of its strong dependency on its export industry the German economy is extremely prone to crises abroad. This affects not only the banking sector, which in the wake of the global financial crisis was brought to the brink of disaster and had to be bailed out by the state, but also the real economy. At around minus 5 per cent the collapse of growth in Germany in 2009 was among the worst, by international comparison. Although unemployment increased only moderately this concealed a massive fall in hours worked due to reductions in working time accounts and short-time working.

In a longer-term perspective, too, Germany's growth and employment dynamic is disappointing by international comparison. Growth was rather weak up to 2005 due to its predominant dependence on export surpluses at the expense of domestic demand. Also alarming is the, by international comparison, low and rapidly declining aggregate productivity growth. The unemployment figures in Germany were high for a considerable period, even before the crisis. Thanks to the advance of financial market capitalism and a labour market policy that promotes precarious employment real wages stagnated. Inequality of income and wealth increased more rapidly than in almost any other OECD country. The low qualified in particular continue to be unable to enter the labour market. Accordingly, already during the years before the crisis fewer and fewer people benefited from economic development; opportunities for economic and social mobility have deteriorated and the risk of poverty (especially in old age) has risen. These serious social problems threaten not only further economic development, but also social cohesion.

The state in Germany has also withdrawn from many areas of economic and social life in recent years. This is reflected, on the one hand, in the development of government expenditure relative to GDP, which, shortly before the crisis, fell to its lowest value since reunification. As a consequence of this, in the public sector Germany now has one of the lowest investment and expenditure ratios for initial and further training, as well as for public infrastructure. This has dampened economic growth in recent years and undermines the basis for future growth.

The tax ratio has also fallen sharply in the wake of extensive tax cuts, as a result of which the state, in the past ten years alone, has forgone revenues of around 350 billion euros and now stands at a very low level by international comparison. The goal of using tax cuts to stimulate investment activity among private companies was not achieved, however. Instead, these tax cuts have reduced the redistributive capacity of the German tax system. Capital and assets are scarcely taxed any more, which serves only to accelerate income and wealth inequality even further. In contrast, the recipients of earned income, especially medium incomes – also as consumers – are effectively bearing more and more of the aggregate tax and contribution burden. As a result, the state, and primarily the Länder and the municipalities, which carry the bulk of public investment, lack the financial muscle they need to cope with tasks as they arise. Not even the goal of reducing the public debt could be achieved. German public debt grew due to the long period of weak economic growth and high unemployment even before the crisis and increased sharply in the wake of the fiscal policy bailouts needed to overcome the current crisis.

Because of its strong export orientation, growth in Germany slumped dramatically (minus 5 per cent). On the other hand, it was able to recover much more quickly than other countries since it benefited disproportionately from the recent global upturn. The latter came about because of the government economic stimulus packages and massively expansive central bank monetary policies applied worldwide. The easing of the labour market permitted modest nominal wage rises. Nevertheless, the German economy has returned to its export-oriented, unbalanced growth model. The currently very low real interest rates – owing to low nominal interest rates and slightly higher inflation – also strengthen growth. The »post-crisis economic miracle«, however, depends on European and global demand, as it did before the crisis. The developing and emerging countries, which at present are supporting the global economic upturn are having to contend with the overheating of their economies, speculative capital inflows and looming asset price bubbles. There are considerable macroeconomic risks and public policy shortcomings, both in Europe and globally, which make the basis of the upturn appear fragile and the distribution of its benefits unfair.

Statistical Annex

Table 1: Basic macroeconomic data: growth and inflation

Year	German GDP at current market prices (billion euros)	GDP real (prices of 2005)	GDP Deflator (2005=100)	Real GDP Growth	Nominal growth rate of GDP	Population (1000)	Real GDP/cap	Real GDP/cap growth
1991	1,534.6	1,873.1	81.93	–	–	80,275	23,333	–
1992	1,648.4	1,908.8	86.36	1.9 %	7.4 %	80,975	23,572	1.0 %
1993	1,696.9	1,889.6	89.80	–1.0 %	2.9 %	81,338	23,232	–1.4 %
1994	1,782.2	1,936.5	92.03	2.5 %	5.0 %	81,539	23,750	2.2 %
1995	1,848.5	1,969.0	93.88	1.7 %	3.7 %	81,817	24,066	1.3 %
1996	1,875.0	1,984.8	94.47	0.8 %	1.4 %	82,012	24,201	0.6 %
1997	1,912.6	2,019.2	94.72	1.7 %	2.0 %	82,057	24,607	1.7 %
1998	1,959.7	2,056.8	95.28	1.9 %	2.5 %	82,037	25,071	1.9 %
1999	2,000.2	2,095.1	95.47	1.9 %	2.1 %	82,163	25,499	1.7 %
2000	2,047.5	2,159.1	94.83	3.1 %	2.4 %	82,260	26,248	2.9 %
2001	2,101.9	2,192.0	95.89	1.5 %	2.7 %	82,440	26,589	1.3 %
2002	2,132.2	2,192.0	97.27	0.0 %	1.4 %	82,537	26,558	–0.1 %
2003	2,147.5	2,184.0	98.33	–0.4 %	0.7 %	82,532	26,462	–0.4 %
2004	2,195.7	2,209.2	99.39	1.2 %	2.2 %	82,501	26,778	1.2 %
2005	2,224.4	2,224.4	100.00	0.7 %	1.3 %	82,438	26,983	0.8 %
2006	2,313.9	2,306.7	100.31	3.7 %	4.0 %	82,315	28,023	3.9 %
2007	2,428.5	2,382.1	101.95	3.3 %	5.0 %	82,218	28,972	3.4 %
2008	2,473.8	2,408.1	102.73	1.1 %	1.9 %	82,002	29,366	1.4 %
2009	2,374.5	2,284.5	103.94	–5.1 %	–4.0 %	81,802	27,927	–4.9 %
2010	2,476.8	2,368.8	104.56	3.7 %	4.3 %	81,752	28,975	3.8 %
2011	2,570.8	2,439.8	105.37	3.0 %	–	–	–	–

Table 2: Composition of GDP

Year	German GDP at current market prices (billion euros)	Gross capital formation (% of GDP)	Consumption (% of GDP)	Exports-Imports (% of GDP)	Government consumption (% of GDP)
1991	1,534.6	23.2 %	76 %	–0.4 %	18.8 %
1992	1,648.4	23.5 %	77 %	–0.4 %	19.3 %
1993	1,696.9	22.5 %	78 %	0.2 %	19.4 %
1994	1,782.2	22.5 %	77 %	0.3 %	19.3 %
1995	1,848.5	21.9 %	77 %	0.6 %	19.4 %
1996	1,875.0	21.3 %	78 %	1.0 %	19.7 %
1997	1,912.6	21.0 %	77 %	1.3 %	19.3 %
1998	1,959.7	21.1 %	77 %	1.4 %	19.1 %
1999	2,000.2	21.3 %	77 %	0.9 %	19.2 %
2000	2,047.5	21.5 %	77 %	0.3 %	19.0 %
2001	2,101.9	20.1 %	78 %	2.0 %	19.0 %
2002	2,132.2	18.4 %	77 %	4.5 %	19.2 %
2003	2,147.5	17.8 %	78 %	3.9 %	19.3 %
2004	2,195.7	17.4 %	77 %	5.0 %	18.9 %
2005	2,224.4	17.3 %	78 %	5.2 %	18.8 %
2006	2,313.9	18.1 %	76 %	5.6 %	18.4 %
2007	2,428.5	18.4 %	74 %	7.0 %	17.9 %
2008	2,473.8	18.6 %	74 %	6.2 %	18.3 %
2009	2,374.5	17.2 %	78 %	5.0 %	20.0 %
2010	2,476.8	17.5 %	77 %	5.5 %	19.7 %
2011	2,570.0	18.2 %	77 %	5.2 %	19.5 %

Table 3: Government revenue, expenditure, deficit and debt

Year	Government revenue (% of GDP)	Government expenditure (% of GDP)	Government budget deficit (% of GDP)	Debt ratio (% of GDP)
1991	43.4 %	46.2 %	–2.9 %	40.4 %
1992	44.7 %	47.1 %	–2.4 %	42.9 %
1993	45.2 %	48.1 %	–3.0 %	46.9 %
1994	45.5 %	48.0 %	–2.5 %	49.3 %
1995	45.4 %	54.9 %	–9.5 %	55.6 %
1996	45.7 %	49.1 %	–3.4 %	58.4 %
1997	45.5 %	48.2 %	–2.8 %	59.7 %
1998	45.7 %	48.0 %	–2.3 %	60.3 %
1999	46.6 %	48.2 %	–1.6 %	60.9 %
2000	46.2 %	45.1 %	1.1 %	59.7 %
2001	44.5 %	47.6 %	–3.1 %	58.8 %
2002	44.1 %	47.9 %	–3.8 %	60.4 %
2003	44.3 %	48.5 %	–4.2 %	63.9 %
2004	43.3 %	47.1 %	–3.8 %	65.8 %
2005	43.6 %	46.9 %	–3.3 %	68.0 %
2006	43.7 %	45.3 %	–1.7 %	67.6 %
2007	43.7 %	43.5 %	0.2 %	64.9 %
2008	44.0 %	44.0 %	–0.1 %	66.3 %
2009	44.9 %	48.1 %	–3.2 %	73.5 %
2010	43.6 %	47.9 %	–4.3 %	83.2 %
2011	44.7 %	45.7 %	–1.0 %	–

Table 4: Labour market

Year	Population (1000)	Active incl. non-natives (1000)	Employment without self-employed (1000)	Hours worked (Mio)	Unemployment rate[3]	Labour productivity per employee (2005 = 100)	Labour productivity per hour (2005 = 100)	Real unit labour costs: (2005 = 100)
1991	80,275	38,712	35,148	60,082	7.3	84.79	78.17	87.3
1992	80,975	38,183	34,567	59,735	8.5	87.60	80.13	93.3
1993	81,338	37,695	34,020	58,318	9.8	87.85	81.25	96.7
1994	81,539	37,667	33,909	58,188	10.6	90.09	83.45	97.1
1995	81,817	37,802	33,996	57,781	10.4	91.27	85.44	99.1
1996	82,012	37,772	33,907	57,074	11.5	92.06	87.19	99.3
1997	82,057	37,716	33,803	56,770	12.7	93.80	89.18	98.1
1998	82,037	38,148	34,189	57,189	12.3	94.46	90.17	98.3
1999	82,163	38,721	34,735	57,745	11.7	94.81	90.98	98.8
2000	82,260	39,382	35,387	57,922	10.7	96.07	93.47	99.3
2001	82,440	39,485	35,465	57,376	10.3	97.27	95.79	99.8
2002	82,537	39,257	35,203	56,585	10.8	97.85	97.14	100.5
2003	82,532	38,918	34,800	55,884	11.6	98.33	97.98	101.4
2004	82,501	39,034	34,777	56,062	11.7	99.17	98.82	100.9
2005	82,438	38,976	34,559	55,775	13.0	100.00	100.00	100.00
2006	82,315	39,192	34,736	55,808	12.0	103.13	103.64	97.9
2007	82,218	39,857	35,359	56,679	10.1	104.72	105.38	97.2
2008	82,002	40,345	35,866	57,365	8.7	104.58	105.25	99.5
2009	81,802	40,362	35,894	55,811	9.1	99.17	102.64	104.8
2010	81,752	40,553	36,065	57,087	8.6	102.35	104.04	103.6
2011	–	41,100	36,554	58,059	7.3	104.00	105.28	105.1

1 Share of unemployed dependent labour force (includes persons subject to social insurance contributions, marginally employed, civil servants and registered unemployed).

Table 5: Foreign trade and FDI (% of GDP)

Year	Exports of goods and services at current prices	Imports of goods and services at current prices	Net exports of goods and services at current prices	Current account	FDI
1991	22.2 %	21.5 %	0.7 %	–1.3 %	–1.3 %
1992	20.8 %	19.8 %	1.0 %	–1.1 %	–0.9 %
1993	18.9 %	17.1 %	1.9 %	–0.9 %	–0.9 %
1994	19.8 %	17.7 %	2.1 %	–1.4 %	–0.9 %
1995	20.7 %	18.4 %	2.4 %	–1.2 %	–1.5 %
1996	21.5 %	18.8 %	2.7 %	–0.6 %	–2.1 %
1997	23.8 %	20.6 %	3.1 %	–0.5 %	–1.9 %
1998	24.9 %	21.6 %	3.3 %	–0.7 %	–4.1 %
1999	25.5 %	22.2 %	3.3 %	–1.3 %	–5.1 %
2000	29.2 %	26.3 %	2.9 %	–1.7 %	–3.0 %
2001	30.4 %	25.8 %	4.5 %	0.0 %	–2.1 %
2002	30.5 %	24.3 %	6.2 %	2.0 %	–0.9 %
2003	30.9 %	24.9 %	6.0 %	1.9 %	–0.2 %
2004	33.4 %	26.3 %	7.1 %	4.7 %	–0.8 %
2005	35.3 %	28.2 %	7.1 %	5.1 %	–2.7 %
2006	38.6 %	31.7 %	6.9 %	6.3 %	–4.1 %
2007	39.7 %	31.7 %	8.0 %	7.5 %	–5.1 %
2008	39.8 %	32.6 %	7.2 %	6.3 %	–2.1 %
2009	33.8 %	28.0 %	5.8 %	5.6 %	–2.4 %
2010	38.4 %	32.2 %	6.3 %	5.7 %	–3.3 %
2011	41.2 %	35.1 %	6.2 %	–	–

Table 6: Income distribution

Year	Wage share (% of GDP)	Income from profits and wealth (% of GDP)	Gini (market income)	Gini net (after redistribution)
1991	67.0 %	23.2 %	0.403	–
1992	68.0 %	22.2 %	–	–
1993	68.1 %	21.3 %	0.435	0.26
1994	66.9 %	22.0 %	–	0.27
1995	66.7 %	22.2 %	0.435	–
1996	66.3 %	22.6 %	–	–
1997	65.5 %	23.1 %	–	–
1998	65.3 %	22.8 %	0.435	0.27
1999	65.9 %	21.8 %	–	–
2000	66.8 %	21.0 %	0.441	0.35
2001	66.3 %	21.2 %	–	–
2002	65.8 %	21.2 %	0.433	0.292
2003	65.9 %	21.7 %	0.441	0.292
2004	64.7 %	24.7 %	0.448	0.298
2005	63.7 %	25.9 %	0.478	0.316
2006	62.2 %	28.2 %	–	–
2007	61.2 %	28.4 %	0.473	–
2008	62.1 %	26.9 %	–	–
2009	65.0 %	24.2 %	–	–
2010	63.6 %	25.6 %	–	–
2011	64.6 %	25.1 %	–	–

Source: Tables 1 to 6: German Council of Economic Experts; »wage share« from AMECO database; author's calculations.

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