to former Social Democratic Party leader Franz Müntefering, who believes that Germany grows at a snail's pace because it is already where others want to be

# The First Shall Be Last

## From the Land of the Economic Miracle to the Sick Man of Europe

After World War II, Germans enjoyed a number of remarkable achievements. Two lost world wars had failed to kill their dynamism. Cities were rebuilt from beds of rubble left in the wake of firebombs, and with much vigor a re-industrialization of the country was pushed forward. Eventually, a solid democracy with a rich economy that now is the biggest pillar of the European Union was created.

The task was particularly difficult, as Germany was divided after the war. About one-third of its territory was given to Poland, and 11 million ethnic Germans were expelled to the West. The remainder of the territory stayed German, but was divided into West and East Germany. A few years later, West Germany became the Bundesrepublik Deutschland (Federal Republic of Germany, here abbreviated FRG) and East Germany became the Deutsche Demokratische Republik (German Democratic Republic, here abbreviated GDR). One-fifth of the population stayed in the East and came under communist rule, while four-fifths lived in the West and were able to enjoy the benefits of a free-market economy. Berlin, the former capital, was divided too, with West Berlin remaining an allied enclave until reunification in 1990.

The eastern part of Germany never really prospered under communist rule, and it has continued to face severe economic problems, even after reunification. But West Germany flourished, establishing a strong export industry and raising the living standard of the masses. The combination of high-level engineering and (in the early years) low wages made West Germany a serious contender on world markets and a great beneficiary of globalization. At the same time, well-oiled public institutions combined with an excellent legal system provided the framework within which the young West German population was able to effectively channel its energy. The Allies' bombing raids in response to Hitler's aggression destroyed nearly all of Germany's cities (not just Dresden), killing a sizeable fraction of the civilian population and shattering most of the country's cultural treasures. Yet the war did not wipe out knowledge in the minds of survivors. Germans knew the rules of the market economy—the written and unwritten laws of productive cooperation in a specialized economy that, in the mysterious ways of the invisible hand, make sure that millions of people interact sensibly. And they obeyed these rules with great discipline.

In the direct aftermath of World War II, many Germans flirted with socialist ideas. Even the early economic and political program of the Christian Democrats (Ahlen 1974) showed a significant socialist influence. But when Ludwig Erhard (Germany's first postwar economics minister) and his "Administration for Business" succeeded in pointing the way, and when the end of rationing soon showed results, there was no holding back. The economic miracle had begun that would define West Germany for much of the second half of the twentieth century.

The West German economy grew by leaps and bounds, and before long there were jobs for everyone. From 1950 to 1960 real gross national income (GNI) increased by 114 percent, and in the following decade it grew by a further 54 percent.<sup>1</sup> In the 1960s the two parts of Germany had almost no unemployment, and in 1970 about 150,000 people were jobless—less than one-thirtieth the present number. West Germany enjoyed an economic boom that hardly anybody had deemed possible at the end of World War II, and for which it was both envied and admired.

Of course, West Germany actually rose from the ashes. East Germany sang of resurrection in its national anthem, but in practice resurrection remained elusive. The communist government failed to unleash the country's productive forces and came nowhere near providing its citizens a standard of living comparable to that enjoyed by their former compatriots. In the early 1970s, East German cities were still full of rubble, and food packages from West German relatives remained in high demand to supplement the meager socialist menu. The only things the GDR really excelled in were doctoring production and erecting billboards to hide the ruins. Eventually even the "heroes of labor" had enough of this nonsense and demanded the West German standard of living, which they saw on television every day. In November 1989, they remembered Ronald Reagan's advice to Mikhail Gorbachev and tore that wall down.

The seeds of a long recession that has yet to be resolved, however, were being planted even as the West German economic boom reached its peak in the early 1970s, before the first oil crisis. It was during this period that people really began to squabble over the spoils of the postwar economic boom and the Social Democrats wanted to "crash test" the economy by increasing the tax burden to finance their social dreams. At the time of the social-liberal coalition under chancellors Willy Brandt and Helmut Schmidt, which lasted from 1969 to 1982, the welfare state was significantly extended in order to let everyone share in the fruits of a still-prosperous economy. Unemployment compensation and social assistance were raised, working time was reduced, and early-retirement options were created. The education system was expanded, the average age of entry into the labor force was increased, university fees were abolished, and a generous student stipend system was introduced. Municipalities received voluminous federal grants to expand the consumptive infrastructure including the building of public swimming pools, sports facilities, and conference halls. The pension insurance system was expanded by granting pension eligibility to the self-employed in exchange for almost purely symbolic contributions on their parts, and so on. Under the social-liberal coalition, the ratio of government spending to GDP, which had stood at 39 percent in 1970, rose to nearly 50 percent by 1980. (See chapter 6.) The subsequent government of Christian Democrat Helmut Kohl, which took office in 1982, made some attempts to limit government spending. However, in order to win the elections it also had to bow to the social-democratic mood of the time and allowed its agile labor minister, Norbert Blüm, to further expand the earlyretirement options. It was not until German reunification that West Germany policy of social democracy ended because then the available funds were needed for the East Germans, who also wanted to partake of the West German welfare state's benefits.

Parallel to the social expansion, wage rates rose. Encouraged by the economy's stellar performance, the unions kept raising their wage demands. Each year witnessed large wage increases, and firms' wage costs climbed faster than their competitors' wage costs in most other industrialized countries. Thus, the real hourly wages of manufacturing sector employees increased by 60 percent from 1970 to 1980 and by another 35 percent from 1980 to 2000.<sup>2</sup> Real hourly wages rose by 117 percent from 1970 to 2000. Wages at the lower end of the salary scale rose even more than the average, because unions tried to gradually level wages by their policy of lump sum instead of proportional wage increases. As a result, West Germany had the highest hourly wage costs of manufacturing workers in the whole world for 20 years, from the early 1980s to the beginning of this decade.

The explosion of wage costs inevitably undermined the international competitiveness of German manufacturing workers. Faced with new low-wage competitors from within and outside Europe, labor-intensive German firms found it doubly hard to keep up. It was a strange role reversal for German companies which had thrived on their low-wage advantage in the 1950s. While most of the exposure to the new competitive forces resulted from exogenous developments ranging from the rise of Japan and the participation of Asian Tigers (including Indonesia, Singapore, and Thailand) to the fall of the Iron Curtain, some competition has been self-imposed. Since the European Union (EU) created an integrated market for goods and services, Germany has lost its former advantage of having a larger domestic consumer market than most of its competitors. With the advent of the euro (1999-2002), which extended the German monetary system to the entire eurozone, German firms also lost their advantage of having lower capital costs. And since the EU's "eastern enlargement" of 2004, German firms have been facing low-wage competition from eastern EU countries where wages are as low as one-eighth the West German level. As a consequence, Germany's attractiveness as an investment location has deteriorated dramatically, and investors have been looking for profits elsewhere in the world.

West Germany's share of net domestic product (NDP) used for private investment averaged 18.8 percent in the 1960s. Although lower in the following two decades, it still amounted to 12.9 percent on average in the 1970s and 7.9 percent in the 1980s. Even in unified Germany it averaged 8.7 percent in the 1990s. In the period 2001–2005, however, it averaged a paltry 2.8 percent.<sup>3</sup> As figure 1.1 reveals, in 2005 the net investment share of NDP— 2.69 percent—was the second-lowest among all OECD countries, next to Japan (which faces similar difficulties).

In 2005, German savings aggregated over all sectors amounted to 145 billion euros (180 billion dollars), but of this amount only 50 billion euros were invested at home.<sup>4</sup> The lion's share of savings—95 billion euros (118 billion dollars) was invested abroad. Thus, in net terms, Germans invested nearly twice as much abroad as at home—mostly in the form of portfolio investment, but also as direct investment. This is hardly paralleled in other Western countries. Weighted by the respective ownership shares, by 2004 Germany's foreign direct investment had created about 4.6 million jobs abroad, of which about 675,000 were located in the new eastern EU countries.<sup>5</sup> The jobs created abroad by financial capital exports certainly have a much higher dimension, but no statistics are available that would allow assessment of that number. The rapid growth of international outsourcing and off-

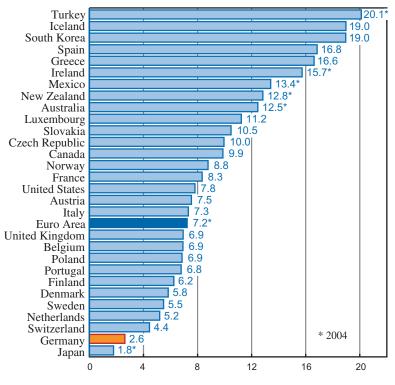


Figure 1.1

Net investment share (percent) in net domestic product, 2005. Sources: OECD database, National Accounts, volume I, main aggregates, 2006, release 03; Ifo Institute calculations.

shoring activities has kept Germany's manufacturers on track. Germany itself, however, is no longer the place where businessmen believe they will be able to make money by investing money and creating new jobs.

The extremely fast increase of manufacturing wages that began in the 1970s and continued in the 1980s caused firms to look for escape routes. German companies evaded high labor costs not only by investing abroad, but also by leaving the economy's labor-intensive sectors and by resorting to a wide range of labor-saving strategies, including mechanized production and the use of industrial robots. Only some of the dismissed workers have been able to find jobs in the rapidly expanding export sectors. An increasing fraction of the workers who lost their jobs have stayed unemployed. Although these structural changes have raised firm productivity and made Germany the world's second-largest exporter, these adjustments have lowered the economy's aggregate productivity as the unemployed have a productivity of zero. As a consequence of the declining investment share in net national product and excessive flight reactions, there has been a dramatic slowdown of growth. Whereas the West German economy had grown by 114 percent in the first decade after the founding of the FRG in 1949 and by 54 percent in the second decade, it grew by 31 percent in the 1970s, by 23 percent in the 1980s, and by only 17 percent in the 1990s.<sup>6</sup> While to some extent this was a natural outcome for the end of a catch-up period, the adverse developments of the labor market show that it also had a pathological component.

From 150,000 unemployed in 1970 (0.6 percent of the labor force), West German unemployment increased to 3.4 million or 10.1 percent by 2005, to which another 1.4 million East German unemployed workers must be added for a total of 4.8 million unemployed. This does not even include the hidden unemployed who, by way of early-retirement and partial-retirement schemes, training, job-creation measures. and similar tricks, were removed from the unemployment statistics but account for at least another 1.2 million people.<sup>7</sup> Neither does it include the silent reserve of discouraged potential employees who have given up searching for a job, which could account for another 0.7 million.<sup>8</sup> The overall number of German unemployed is about 6.7 million. While the official German unemployment rate was 11.7 percent in 2005, the effective rate corresponding to the 6.7 million unemployed was 16.1 percent. The cost of open and hidden unemployment has gone out of bounds in Germany. In 2005, the overall cost was a good 100 billion euros or 125 billion dollars a year, not counting the huge administrative costs entailed in delivering unemployment benefits.9

Figure 1.2 shows that Germany is one of the few countries without a "natural" rate of unemployment, to use a theoretical economic term that indicates a stable rate of unemployment resulting from the usual frictions in the labor market. Since 1970, unemployment in West Germany has increased along a nearly linear trend with ten-year cycles. Over one five-year period unemployment increases and over the next five years it declines, but it never declines as much as its previous increase. Whenever the unemployment rate declines, the ruling coalition invariably congratulates itself on having brought about a trend reversal. The celebrations are always misplaced. On the last such occasion, the Schröder administration took credit for an economic recovery that had already started well before the 1998 election which had propelled them to power.

Today, Germany finds itself in the middle of its fourth decade of cyclical unemployment growth. The first cycle lasted from 1970 to 1980, the second from 1980 to 1991, and the third from 1991 to 2001. Unemployment increased until 2005 but now may decline over the next few years thanks to the

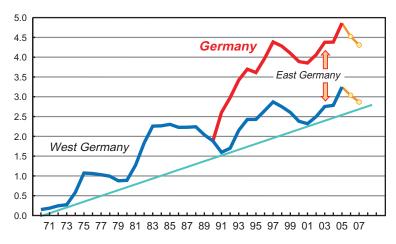


Figure 1.2

Unemployment (millions) in West Germany (including West Berlin) and East Germany (including East Berlin), 1970–2007. Sources: Bundesagentur für Arbeit; from 2001 regional differentiation of Berlin; IFO Institute calculations; 2006 and 2007 forecast of Institutes, Joint Analysis, autumn 2006.

worldwide economic upturn.<sup>10</sup> Unfortunately, however, there are no signs yet of a lasting trend reversal, because the blend of internal institutional problems and international low-wage competition that gives rise to Germany's structural problems is unlikely to change in the foreseeable future. When the current decade is over, the next wave of rising unemployment may begin.

However, the increasing unemployment trend, which has lasted for 35 years, cannot continue any longer. It seems very unlikely that the FRG could survive it for a further 35 years. Unemployment would then be as high as in the early 1930s, a situation that had, as is well known, devastating political consequences. Thus the trend will have to be broken by courageous reforms of the kind that will be discussed in this book.

Germany's labor-market problems were aggravated by the reunification process, which was not as smooth as politicians had predicted. Neither the often-proclaimed self-sustained upswing nor the blooming meadows that Helmut Kohl said would spring up after "three, four, five years" have materialized. Since the expiration of the Regional Development Law (Fördergebietsgesetz), which had initially caused a short-lived boom due to enormous government subsidies, the gap between East and West Germany's economic performance has widened every year. East German industry has yet to recover from a privatization process that managed to destroy three-fourths of all manufacturing jobs. In East Germany the share of privately employed wage and salary earners who work in the manufacturing sector is only about two-thirds that of West Germany, a divergence similar to that between the chronically sick Italian Mezzogiorno (the southern part of the country) and the rest of Italy (including the industrial economy centered in the north).<sup>11</sup> Although relative to the West an excessively large share of East German wage and salary earners are government employees, this region's employment declined from 9.8 million before the fall of the Berlin Wall to 6.1 million in 2005.

The East German economy has been financially dependent on West Germany since reunification, and it will not be able to stand alone in the foreseeable future. One-third of the euros that are being spent in East Germany on goods and services were not earned there but were provided by others as loans or gifts, primarily in the form of social transfers financed out of West German taxes and social security contributions. There probably has never been so large a region or country as dependent, in relative terms, on external support. The growing interest-payment burden borne by the German state is due in large part to the additional debt incurred to compensate for the largely avoidable mistakes committed during the reunification process. National and international firms that invest their funds in Germany know that they will be asked one day to help finance the unresolved problems of German reunification, which is one of the reasons why Germany's investment rate is so low.

Germany was once Europe's growth engine, but since the mid 1990s it has brought up the rear on the European growth train. As figure 1.3 shows, while the German economy expanded by 14.5 percent in the period 1995–2005, the total output of the EU-15 (that is, the pre-enlargement EU countries) output rose by 24.2 percent. Indeed, Germany competes with Italy for the questionable title of having had the lowest growth rate of all EU countries during that period, be these located in Eastern or Western Europe.<sup>12</sup> Even outside the EU, there are no countries in Western Europe that grew more slowly. Germany and Italy are the sick men of Europe.

#### The Rise, Decline, and Resurrection of Britain: Lessons for Germany

The economic growth of countries moves in cycles. Nations take turns being on top, but it can take generations to go from one state of affairs to another. There are very short business cycles that change the degree of capacity utilization in about a two-year rhythm, and there are cycles with ten-year intervals like those shown in figure 1.1. The truly long structural cycles that take place over several decades are, however, the most important; it is these longer periods that change the relative economic position of individuals countries in a lasting and meaningful way. Germany and Britain are excellent examples of these historical ups and downs.

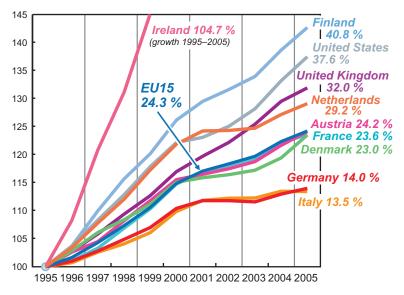


Figure 1.3

Gross domestic product in selected countries in 1995 prices (1995 = 100). Sources: Eurostat; U.S. Bureau of Economic Analysis; Ifo Institute calculations, November 2006.

The first half of the nineteenth century belonged to Britain, where the industrial revolution began. Then Germany caught up. After its victory over France in 1871, Prussia reestablished the German empire, which (as the "Holy Roman Empire of German Nation") had been destroyed by Napoleon in 1806, in a reduced form without Austria, and prepared the ground for unparalleled economic and scientific prosperity.<sup>13</sup> Germany became a tough competitor to the British industry and enjoyed much more rapid growth in industrial production than Britain did. However, it never did quite catch up. In 1870, Germany's national income per capita had stood at 57 percent of that of the United Kingdom (which at that time included Ireland), and by 1914 it had risen to almost 80 percent.<sup>14</sup> As Germany's population was 44 percent larger than Britain's, this of course did not mean that the German economy was smaller.<sup>15</sup> In fact, the data cited imply that aggregate national income was 14 percent higher in Germany than in Britain.

After its defeat in World War I, Germany had a hard time recovering under the Weimar government. In 1938, German per capita income was still only about 80 percent of the British value, as it had been before World War I.<sup>16</sup>

The relative situation changed again after World War II. Although culturally and scientifically Germany has never managed to recover from the two world wars, it surprised everyone by the pace of its economic growth after 1945, especially relative to Britain. Britain could justifiably bask in the glory of having won the war, but economically it stagnated. Victory led to complacence, and structural economic reforms were put on the back burner. Only the Labour Party carried out extensive social and economic reforms, including the nationalization of British industry. If these were structural reforms, they went into the wrong direction by hampering British competitiveness. Extremely high taxes on "unearned" capital income and the comprehensive protection against dismissal enjoyed by British workers made the economy extremely inflexible. As a result, Britain grew modestly and had increasing difficulty keeping up with the rest of Europe.

This sluggish British growth enabled Germany to catch up more quickly than it might otherwise have been able to do. By 1960 the two countries had roughly the same per capita income, and by the mid 1960s Germany surpassed Britain. Britain had become the sick man of Europe. The sun seemed to have finally set on the British Empire. Intoxicated its economic miracle, Germany surged forward so rapidly that by 1978 it enjoyed a per capita income double that of the United Kingdom, valued at current market prices and exchange rates.

The shock this stagnation called forth in the British people was deep-seated. In 1979, Britain's economic woes catapulted Margaret Thatcher, the Conservative Party leader, to the office of Prime Minister, which she held until 1990. During this time, Britain underwent an economic revolution by moving toward privatization and free-market values.

Margaret Thatcher turned the entire economic system upside down by using extensive legal reforms to give more weight to the principles of a market economy and the idea of assuming responsibility for oneself.<sup>17</sup> She did not shy away from conflict, picking quarrels with powerful interest groups, most notably the unions. With the Employment Acts of 1980, 1982, and 1984, Thatcher limited strike measures that adversely affected third parties, and she abolished the widespread company commitment declaration for recognizing unions. She weeded out closed-shop practices with which the unions had tried to keep non-union employees out of public and private companies, and she instituted more democratic participation within unions in order to get rid of Mafia-type union governance. Thatcher privatized state-owned companies with a high concentration of unionized workers. She favored the introduction of wages in the form of profit sharing, and she supported self-employment and entrepreneurship. Above all, Thatcher pushed economic deregulation by, among other things, freeing the labor market from unnecessary rules and regulations. She reduced the top personal income tax rate from 60 percent to 40

percent. The share of the public sector in GDP declined by nearly 4 percentage points during her administration. Thatcher reduced the role of the state pension system by promoting the change from the public pay-as-you-go system to a privately funded system. She reduced social benefits across the board, curtailing housing allowances and cutting social assistance. But she also created a new system of helping the poor by establishing welfare-to-work schemes. She privatized the state-owned monopolies and opened their markets to competition. This stimulated a wave of privatization all over Europe. In Germany, this meant deregulation of the power and telecommunications sector, leading to substantial price reductions from which German consumers continue to benefit.

Of course, Margaret Thatcher's social reforms were not beyond reproach. The stereotypical German social activist still shudders at the thought that her radical reforms may one day be implemented in Germany. It is true that Margaret Thatcher's reforms left many behind. Any tourist in London could surmise from the number of homeless sleeping in doorways that her policies may not have helped alleviate poverty. And having to endure Britain's public transport system makes it amply clear that privatization is not always a good thing, at least not the British brand of railway privatization.

Yet on the whole Thatcherism was a huge success for Britain. The Iron Lady steered her country back on the right track, exceeding all expectations and silencing her critics. Although the complete economic benefits of her structural reforms did not show up until after she had been ousted, these have endured. Thatcher's bold reforms made John Major and Tony Blair's lives easier, as they will the lives of future British prime ministers.

Britain's unemployment rate, at its peak higher than even Germany's is today, rose consistently during the first half of Thatcher's tenure. Thereafter, it declined steadily, falling below the German level in 1997. In 2002, when German unemployment was at a dizzying 7.8 percent, unemployment in the United Kingdom was down to 5.2 percent.<sup>18</sup> Of course, such data should be interpreted with caution. There is good reason to believe that the British unemployment data underestimate the true level of unemployment because many displaced workers moved from unemployment compensation to health-related benefits and were then no longer accounted for in the unemployment statistics.<sup>19</sup> However, the German unemployment data do not show the true level of unemployment either. In Germany, many unemployed are technically hidden in early-retirement schemes or in the generous system of social aid.

Arguably, the success of Margaret Thatcher's policies is best seen in the data on Britain's economic growth. As figure 1.3 shows, between 1995 and 2005 the United Kingdom's output growth exceeded Germany's by 18

percentage points and that of the entire EU by 7.7 percentage points. During the slump of 2001–2003, as the world economy stumbled after the attack on the World Trade Center, the British economy grew by an average 2.2 percent per annum, while the German economy practically stagnated with an average growth of only 0.4 percent. And when the world economy convincingly recovered in 2004 and 2005, the British growth rate averaged 2.6 percent, while the German rate was only 1.1 percent.

This performance gap exemplifies the German problem. Germany is as affected by the global business cycle as the next country. But there is something fundamentally wrong with its long-run growth. The country's dynamism is gone. In 2005 its trend growth rate was little more than 1 percent per year—one of the lowest rates in Europe. This is not just a business-cycle problem that can be resolved using short-term stimulation. It demands major structural reforms.

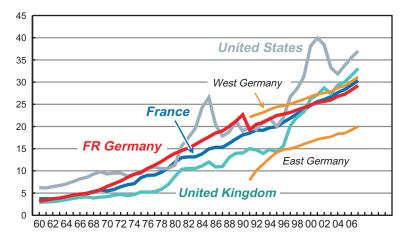
#### France, Austria, the Netherlands, and Others Also Overtake Germany

During the 2002 federal election campaign, Franz Müntefering, then party secretary and later chairman of the Social Democrats, Germany's traditional party of social reform, attributed Germany's relatively poor recent growth performance to the tremendous lead it had held over other countries for many years. The further behind you are, the faster you have to grow in order to catch up with the leader, and Germany, he explained, is already where the other European nations aspire to be.

This is a cute theory, but not all cute theories are accurate. The truth is that Germany is being overtaken by one neighboring country after another not only in terms of growth, but also in absolute terms with respect to output per capita. Today, Germany is in the same situation in which Britain found itself toward the end of the 1960s. Not only has Germany's output growth slowed; its level of output is lower than those of many other countries.

Figure 1.4 shows nominal per capita national incomes in absolute terms from 1960 to 2005 according to national statistics. The lines are determined by the evolution of real output, the national price level, and exchange rates. Therefore, these do not necessarily correspond to the real improvement of the respective economies. The comparison between different countries is nonetheless revealing, as it reflects the relative global market value of their national products. Over long periods of time, countries can only be compared reasonably at current prices and exchange rates.<sup>20</sup>

The line for Germany in figure 1.4 shows the evolution of per capita gross national income (GNI) of the Federal Republic of Germany (that is, West



#### Figure 1.4

France and the United Kingdom in the passing lane: Per capita gross national income in thousands of euros at current prices and exchange rates. West and East Germany: Gross domestic product. Here West Germany includes West Berlin and East Germany includes East Berlin. Regional differentiation of Berlin: Ifo estimates. Sources: OECD, National Accounts, 2006; Arbeitskreis Volkswirtschaftliche Gesamtrechnungen der Länder, August 2006; Deutsche Bundesbank, 2006; Ifo Institute calculations.

Germany until 1990 and West and East Germany thereafter).<sup>21</sup> One can see that German national income dips at the time of reunification. This reflects the numerical effect of integrating East Germany into the Federal Republic: the low output of East Germany reduced the average of the entire country. But even afterwards the pace continues to be slower than before. Other countries are drawing ever nearer, and some have already overtaken Germany.

In comparison to Germany, Britain's growth is particularly remarkable. The country's stagnation in the 1970s, before the election of Margaret Thatcher in 1979, is clearly discernible. One can see that the relative distance between the British and German curves was largest around 1978, when the British per capita income was only half that of the German. These were the circumstances that brought Margaret Thatcher to power. After she took office, things turned around. Britain enjoyed a growth surge that started in the 1980s, accelerated further in the 1990s and ended up with the United Kingdom overtaking Germany in per capita terms in 2000. It is true that unadjusted UK growth since the mid 1990s partly reflects the appreciation of the pound sterling. However, figure 1.3 is adjusted for exchange-rate and inflation effects, and, as it clearly shows, the British economy has continued to grow rapidly even in real terms, despite the fact that the pound's sustained appreciation has been making British products more expensive to foreign buyers. Given that the

current surge in Britain's real income is so great, its per capita income cannot be pushed below Germany's in the next few years unless the pound depreciates relative to the euro.

The fact is that according to official statistics (that is, if national income is valued at current market prices and exchange rates) the United Kingdom has already surpassed Germany in per capita income. Again it must be emphasized that, as the British population is much smaller than Germany's, this does not mean that the British economy as such is bigger than the German one. In 2005, Germany's gross national income exceeded that of the UK (including Northern Ireland) by 23 percent. However, it does reveal that the overall output per capita as evaluated by markets is higher in the UK than in Germany. This baffles Germans, who typically have a poor image of British business, especially after the failed BMW-Rover deal, and have an inflated image of their own economic power. This self-image reflects past achievements rather than the present state of affairs. It ignores the British successes with information and communication technologies. It also ignores Britain's success in the services area: boosted by the rapidly growing market for financial services. London and its surrounding metropolitan area is today the richest region of Europe. German reunification is not the only reason for Britain's superior performance. In per capita income, Britain is slightly ahead even of West Germany alone.

Germany's deficiencies are even more striking if the country is compared with the United States. Figure 1.4 shows a volatile curve for the United States because the exchange rate between the dollar and the deutschmark or the euro, respectively, has changed substantially in the last few decades. Nevertheless, in 2005, American gross national income per capita was 23.4 percent above the German level despite the dollar's exceptionally weak value against the euro.

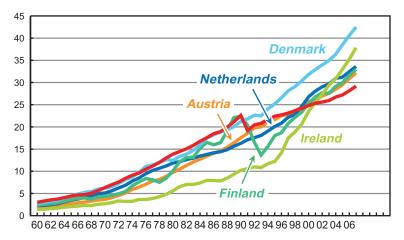
Germany's poor showing is not limited to a comparison with Britain and the United States. France, too, has just surpassed Germany in per capita terms, despite all its domestic problems. As the exchange rate between Germany and France was constant long before the introduction of the euro, exchange-rate effects cannot be used to explain this fact. Like Britain, France used to have a somewhat lower per capita income than Germany. Until 1969 it was roughly on par with Germany, but during 1970s and the 1980s it was unable to match Germany's growth. By 1990, France's per capita income was only about 80 percent of Germany's.

Things changed in the 1990s, when Germany slumped and France continued to grow at the EU average. France overtook Germany in 2002. This is another reversal of fortune that has escaped the notice of Germans, whose image of the French economy trails reality by decades. France is no longer the country of the rattling, rusty little Renault. It has become a high-tech country, excelling in particular in nuclear technology, aerospace, and genetic engineering. Even in the automotive industry, Germany's remaining treasure, France is gaining on Germany's market share in Europe.

Germany and Denmark were neck and neck until German reunification, after which Denmark raced ahead. By 2005, Denmark's per capita income exceeded Germany's by about 37.4 percent. As figure 1.5 shows, this surely had something to do with the numerical averaging between East and West Germany. Yet the radical 1993 reforms with which Denmark cleaned up its labor market deserve credit. Much will have to happen before Germany can hope to follow the Danish example.

The Netherlands and Austria also lagged behind Germany for a long time, but they moved ahead in 1999. Gone are the times when Germany looked with pity at the mountain inhabitants to the south and the plain dwellers to the northwest.

The Netherlands had a serious growth crisis in the late 1970s and early 1980s. This crisis was gradually overcome by a policy of wage moderation initiated by the 1982 Wassenaar Agreement and implemented in the 1980s and the 1990s. Year by year, the Dutch economy regained its competitiveness, and in the 1990s high growth rates were achieved. The Netherlands' lag behind Germany shrank gradually and then turned into a lead.



#### Figure 1.5

Per capita gross national income (thousands of euros, at current prices and exchange rate) in the "small tigers" of the European Union. Sources: OECD, National Accounts, 2006; Deutsche Bundesbank, 2006; Ifo Institute calculations.

Austria's development is also impressive. In 1970, Austria's national output was only 59 percent of West Germany's. Austro-Socialism strangled the country, and Austria was afraid to undermine its neutrality pact with the Soviet Union by moving in the direction of free-market economics. Bruno Kreisky had the country fully in his grip with his SPÖ (Austrian Social Democratic Party). Then began the détente. Mikhail Gorbachev granted more freedoms, and Austria slowly dared to open up, most visibly by joining the European Union in 1995. All of this boosted growth and finally resulted in Austria's surpassing a Germany weakened by reunification. It is now the Austrians who look down from their mountaintops with pity on their fellow German-speakers.

Ireland's growth has been nothing short of miraculous. In the 1960s Ireland belonged in the European poorhouse with a per capita output less than 50 percent that of Germany. A combination of factors gave rise to its now having by far the highest growth rate in Europe. These include EU accession in 1973, which brought new trade options and the funds for rebuilding and extending its infrastructure, and a low-tax policy characterized by a corporate income tax rate of only 10 percent, consciously designed to attract internationally mobile capital. Added to this was an extremely market-friendly economic policy, modeled on that of the United States, which minimized business regulation and cut back on the welfare state. At only 32 percent, Ireland has one of the lowest public-sector shares in Europe<sup>22</sup>, and, thanks to its low social security contributions and weak labor unions, it has only about 70 percent of West German labor costs. During the 1990s, Ireland achieved an average annual real rate of growth of 6.5 percent. Even in the lull year of 2002, when the German economy stopped growing altogether, the Irish added another real 3.3 percent. In terms of per capita national income, Ireland has moved far ahead of the European average and Germany as well. According to international comparable data for 2005, Ireland's per capita gross national income exceeded Germany's by 23.4 percent, with no slowdown of the growth trend in sight.

Ireland's economic boom is evident when one travels in the country. There is construction everywhere, there is hardly any unemployment, and the country is gripped by a spirit of optimism. To be sure, there is considerable income inequality. Economic dynamism has its price in that wages typically are low and lag behind productivity gains. But wages are pulled up with the general growth of the economy. Today Irish wages are much higher in real terms than they were before the economic takeoff, and the day may come when they will exceed German wages. Ireland's housing stock and infrastructure do not yet meet German standards. However, they reflect past rather than present levels of economic activity. It is only a matter of time until Ireland's increasing wealth will be visible.

It is sometimes claimed that the official Irish economic statistics are inflated by tax fugitives from all over the world shifting their profits to Ireland. The claim is that if these profits are excluded from the Irish data it will be clear that Ireland has not yet overtaken Germany. This is incorrect. Figure 1.4 refers to gross national income, not gross domestic product per capita. Only the latter contains profit incomes that accrue to foreigners. In 2004, Ireland's gross domestic product was 17 percent higher than its gross national income, whereas Germany's GDP and GNI diverged by only 0.02 percent. The Irish curve would shift to yet a higher level if the graph were comparing data on gross domestic product rather than data on gross national income. Figure 1.5 does show the lower of the two values, i.e. the national income earned by the Irish themselves. It is, of course, true that this income was able to grow so rapidly because, among other things, the huge capital inflows attracted by low taxes and labor costs raised Irish wages and rents via indirect effects. But this is exactly what makes a high-quality location high-quality. East Germany could take a page from Ireland's example.

It does not stop there. The growing list of European countries with better economic performance than Germany includes such unlikely candidates as Finland. And this cannot just be blamed on exchange-rate shenanigans, since the Finnish currency is suspected to have joined the euro area at an undervalued rather than an overvalued exchange rate.

Finland is no longer just a small country on the Russian border, fondly remembered for saunas, lakes, forests, and a nearly bankrupt television manufacturer called Nokia. Though the country suffered a serious economic crisis after the collapse of the Soviet Union, it recovered, boosted by EU accession in 1995, and it has achieved solid economic growth. Finland, too, has surpassed Germany in GNI per capita since 2001, and by 2000 Nokia—now reconfigured as a telecommunications leader—was the company with the highest market capitalization in Europe.

## Intellectual and Scientific Decline in the Land of Goethe

Long before its relative economic decline, Germany suffered a decline in its cultural position. Even in areas where the land of the poets and thinkers believes itself to be ahead of the rest, things are no longer as they were.

German culture produced many early contributors to modern civilization, including Martin Luther, Johannes Gutenberg, Nicolaus Copernicus,<sup>23</sup> Johannes Kepler, Immanuel Kant, Arthur Schopenhauer, Gottfried Wilhelm

Leibniz, Carl Friedrich Gauss, Wolfgang von Goethe, Friedrich von Schiller, Johann Sebastian Bach, Wolfgang Amadeus Mozart, and Georg Friedrich Händel. However, the real breakthrough of German culture came in the late nineteenth century.

From the second half of the nineteenth century up until World War II, Germany was responsible for a disproportionately large number of important scientific and cultural ideas that had impact around the world. The German judicial system was exported to a number of other countries and with it the institutions that are characteristic of modern industrial society. The German social security system, the first in the world, was also copied by many countries and became the foundation of the European-type social market economy. Even communism and socialism sprang from the German political debate.

Most remarkable was Germany's academic leadership. The educational system established by Wilhelm von Humboldt was exemplary, and German universities were home to the world's academic elite. Between 1901 and 1933, 10 of 31 Nobel prizes in physics, 14 of 28 Nobel prizes in chemistry, 6 out of 27 Nobel prizes in medicine, and 5 of 31 Nobel prizes in literature went to Germany.<sup>24</sup> No other country had collected more prizes in any of these disciplines.

At the same time, Germany was responsible for a substantial share of inventions. The natural sciences were the unchallenged domain of the Germans, and even today a sizeable portion of the technological knowledge that created modern industrial society and its standard of living is based on German inventions and research findings. The range of technical inventions includes the telephone (Johann Philipp Reis, 1861), the dynamo motor (Werner Siemens, 1866),<sup>25</sup> the motorcycle (Gottlieb Daimler, 1885), the automobile (Karl Benz, 1885), the four-stroke engine (Nikolaus August Otto, 1876), the diesel engine (Rudolf Diesel, 1892), the jet airplane (Hans-Joachim-Pabst von Ohain, 1939), the liquid-fueled rocket (Wernher von Braun, 1926),<sup>26</sup> the binary and programmable computer (Konrad Zuse, 1941), and the first programming language (Zuse, 1945). Nuclear physics and its central theoretical findings were developed primarily in Germany, as was modern organic chemistry. The German dominance of the natural sciences was so omnipresent until well into the 1930s that for some time German served as the international scientific language. Foreign scientists published their findings in German, and in the United States some scientific periodicals were issued in German.

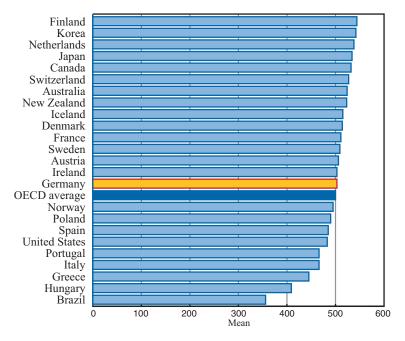
Indeed, Germany had substantial influence on the development of the sciences in the United States. Starting with Johns Hopkins University in Baltimore, American universities offered graduate programs patterned on German ones, and the German "Wissenschaftsgeist" (scientific spirit) and the "freedom of research and teaching" became prominent attitudes at American universities. The motto of Stanford University is "Die Luft der Freiheit weht," meaning "The wind of freedom blows."<sup>27</sup>

A century has passed since Germany's intellectual golden age, and nothing is as it once was. Was it the poisoning of the intellectual spirit by the Nazis? Was it the loss of scientists and research time during the war and the subsequent reconstruction period? Was it the extermination and expulsion of the Jews, who had made great contributions to German culture? Was it the success of Churchill's attempt to bomb the country back to the Middle Ages? Was it the loss of pride, tradition, and self-esteem after two devastating military defeats? Was it the implication of social-democratic politics that emphasized consumption by the masses rather than the achievements of the country's cultural elites in order to counter the promises of the East German communists? No one can give simple answers to these questions. However, the facts are undeniable.

Since the end of World War II, German scientists have been striving for a place as equals in the international scientific community, but they are confronted with formidable domestic obstacles. No longer the "worldly dukes" they were in the days of the Kaiser-Wilhelm-Gesellschaft, German researchers—now administrators of an egalitarian science operation—have lost the esteem of German society. Aspiring young German scientists emigrate to the United States, as they did in the 1930s. Only a few "star disciplines," including physics and chemistry, have managed to retain leading researchers. Most German contributions hardly make a dent in the international scene. Even the star disciplines are not what they once were. Between 1970 and 2005, Germany earned only 3 of 36 Nobel prizes in physics, 2 of 36 Nobel prizes in chemistry, and 3 of 36 Nobel prizes in medicine.<sup>28</sup>

The pathetic state of the German school system fits this picture of a decline in excellence. According to the PISA report of the OECD,<sup>29</sup> in practically all tests, but especially in language proficiency and mathematics, the performance of 15-year-old German students is just about at the OECD average. Figure 1.6 shows only the results for mathematics, as this discipline provides a more objective comparison across countries than, for example, language proficiency (in which Germany did equally poorly). It is not surprising that the German school system cannot compete with the rigidly run school systems of Japan and Korea. But it is remarkable that Germany lags so far behind Finland, Switzerland, France, and Sweden.

It is true that the OECD report may not reflect the full picture. It ignores the specific performance of the German vocational school system, which is



#### Figure 1.6

Educational proficiency in mathematics. Source: OECD, first results from PISA 2003 study, 2004, p. 356, table 2.5c.

rightfully held in great esteem. For that, the 15-year-olds who were tested were too young. The study also does not take account of the fact that in Germany pupils start school at a later age than in other countries and that in Germany many children repeat one or even two grades if their performance is below par. Still, by and large the study cannot be criticized. It starkly demonstrates that Germans are drawing on past glory and not living in the present. They remain under the delusion of belonging to the country of great poets and thinkers while in reality, at least with regard to education, they are merely average.

This present situation is incompatible with a prosperous future, which entails revamping the German educational system. The range of such measures includes lengthening the school day (today children go to school only from 8 A.M. to 1 P.M.), improving preschool education, administering centralized examinations, offering higher pay for teachers to attract better ones, quality control and better incentives in the schools, and introducing more competition among universities.

It is hard to tell whether the educational weakness is one of the reasons for Germany's present economic crisis. As will be discussed in chapter 4, it may be contributing to the high unemployment in the low-wage sector. In any case, the educational weakness and the economic crisis are the combined result of politicians' misguided focus over the past 30 years on developing the German welfare state. Whether driven by the need to compete with the socialist system of the GDR or by the student revolts of 1968, the welfare state gobbled up funds that could have been invested in education, and this has hurt the labor market by creating comfortable alternatives to gainful employment and educational effort. To date, the economy seems to have weathered the effects of poor education. So far, Germany has been able to draw on a pool of highly skilled workers and first-class engineers. This is why Germany still leads the European pack with regard to patent registrations. Measures taken today to improve the education system would pay off for the labor market from 2020 on, when the better-educated students would enter the work force. Unfortunately, it does appear that any such measures will be adopted in the foreseeable future.

#### The Maastricht Treaty: One That Hurts Another Hurts Oneself

In this comparative international context, it is worrisome to watch the evolution of the German public finances. Government debt, which ballooned as a result of the error of financing German reunification by issuing bonds rather than by increasing taxes, has risen enormously in recent years. Between 1990 and 2005, it went from 539 billion euros to 1.52 trillion. The debt increase was so huge that before the introduction of the euro Germany even missed the Maastricht Treaty target to keep government debt below 60 percent of gross domestic product.

The problems are now further exacerbated by the economic conditions in Germany. When the economy is not doing well, tax revenues decline, and the welfare state quickly becomes more expensive because the rising unemployment must be financed by the government. The most convenient strategy for the finance minister is to balance the revenue shortfall by borrowing even more—that is, by increasing the budget deficit. Moreover, when the economy stagnates, it is not possible to keep the debt/GDP ratio under control by expanding the denominator of this ratio in line with its numerator. In 2005, Germany's debt/GDP ratio had reached 68 percent.

It is true that excessive borrowing is blocked in principle by the European Stability and Growth Pact that limits the deficit to 3 percent of gross domestic product. Germany no longer seems to take the pact seriously, however. It violated the pact during the period 2002–2005 with deficit ratios well above the ceiling. The violations caused the EU to start formal proceedings against Germany, as called for in the pact.

This fiscal deficit spending is of special interest insofar as it was Germany that insisted on the Stability and Growth Pact in the first place, even against the will of other EU countries. In the 1991 Maastricht Treaty, the EU countries had agreed on a new currency without laying down a timetable. Germany was hesitant to abolish its deutsche mark, even though the new monetary system was based very much on its own, with an independent central bank and an internal structure similar to that of the Bundesbank. However, in the end it was willing do so on condition that the euro-area countries would permanently honor the 3 percent deficit ceiling that originally had been agreed only for the period preceding the introduction of the new currency. It further demanded effective penalties in case that the ceiling was exceeded. The other countries, which wanted to get rid of the deutsche mark and the dictate of the Bundesbank, were not happy about this proposal, but had to accept it. Germany's conditions were accepted in the Stability and Growth Pact of 1996. It was, therefore, with a good bit of hidden Schadenfreude that they registered Germany's formal violation of the deficit criterion. One that hurts another hurts oneself.

The Germans had overestimated the strength of their economy in a period of worldwide slump, and they had underestimated the costs of their generous welfare system.

The German government hesitantly reacted to its violation of the Stability and Growth Pact. Instead of cutting expenditures, it proposed some measures to broaden the tax base in 2002. These measures did not suffice, however, to provide a safe margin to the deficit ceiling. Thus, in 2003 a budget deficit of about 4.0 percent materialized, and in 2004 and 2005 deficits of 3.7 percent and 3.3 percent resulted.

The EU's Ecofin Council has been hesitant to enforce the pact against Germany. Germany allied itself with France, which also violated the pact, and implicitly also with the potential violators Italy and Portugal, and succeeded in convincing the Council not to take action. Small wonder: the Ecofin Council is the assembly of the European finance ministers. The ministers, who were their own judges and jury, easily agreed not to penalize one another and to postpone the proceedings. The decision of the Ecofin Council was not in conformance with the law, however. The European Commission brought suit before the European Court and won. The deficit proceedings against Germany had to be continued. The German government's hope for mercy was in vain. Fearing the fines foreseen in the treaty, the new German government under Angela Merkel eventually announced a three-percentage-point increase in the value-added tax. Combined with the slight upswing in the wake of the booming world economy, this is enough to keep the deficit way below 3 percent of GDP in 2007.

Nevertheless, the credibility of the European financial system has been severely undermined by Germany's negligence. At the first opportunity for its application, the Stability and Growth Pact was challenged. Such a policy threatens not only the reputation of Germany, but also the stability of the young currency that was to be safeguarded.

It must be admitted that the Stability and Growth Pact could have been better designed. During a boom, when the finance ministers have lots of money, the debt and deficit ceilings could be tighter, and during a slump they could be looser. The rules do not induce the countries to practice spending discipline in good times to be able to ease up during bad times in order to stimulate economic activity. That is why the European Economic Advisory Group at CESifo proposed to change the pact in a way that would permit a country, during prosperous periods, to save more and reduce the debt level in order to create the desired greater flexibility for periods of downturns.<sup>30</sup> A country that succeeds in lowering its debt level below 55 percent of its gross domestic product may then temporarily run deficits of more than 3 percent of GDP. But that proposal has not been adopted, and it would not have helped Germany, whose debt level already far exceeded 60 percent of GDP.

### History's Guinea Pig

Germany, once the economic powerhouse of Europe, is unable to keep pace with its neighbors and unable to satisfy the increasing demands of its citizens. Two devastating wars did not destroy the country's dynamism, but the peaceful development since World War II has been doing just that.

Germany is because it is being strangled by the very welfare state that the prosperous and peaceful episodes in its history have produced. Aspiring to be model neighbors to their European partners, German voters, politicians, union leaders, and employer representatives have tried to fulfill the dream of the just and everlasting welfare state, but in doing so they have overburdened their own economy. For good will to succeed, one cannot violate basic economic laws. But this is what the Germans have been doing.

The country has been caught in a vicious circle since the expansion of the welfare state accelerated in the 1970s while the economic growth rate simultaneously began to decline. For three decades the government has tried both to raise the country's social standards and to cushion the consequences of a weakening economy by increasing public transfer payments to the unemployed. But this has made things worse and has increased the need for further costly welfare state actions. Germany is suffering from economic overstretch.

Germany's share of public social expenditure in GDP exceeds 30 percent. An astonishing 41 percent of its adult population lives on social transfers from the government, including public pensions. Taxes, contributions, and public borrowing finance these expenditures. The marginal employer and employee tax and contribution rate on the value added produced by an average industrial worker is nearly two-thirds. Black-market activities flourish under these conditions, but the legitimate economy is struggling to survive. Chapter 6 will go into the details.

The German disease is a disease of the welfare state, which, despite being the cornerstone of the German model, has incurred immense fiscal costs and has destroyed economic incentives.

Germany invented the welfare state. In the 1880s, Chancellor Otto von Bismarck introduced public health insurance, public disability insurance, and the public pension system to appease the disgruntled masses and help reconcile them to the capitalist market system. He succeeded in preventing the revolution that his compatriot Karl Marx had predicted and that later was to take place in Russia.

Bismarck's welfare state became the model for Europe. One European country after another copied his reforms in the first half of the twentieth century, stabilizing and modernizing their societies. Even outside Europe, the model earned friends among the industrialized countries. There were only few exceptions—among them the United States, which did not follow the German road.

The threat of revolution and a communist victory over capitalism not only shaped German social politics at the time of Bismarck, it continued to do so until the collapse of the Iron Curtain in 1989. German governments had always been frightened by Lenin's claim that their country was to be the main battlefield for the communist revolution, and once the Soviet Union succeeded in establishing a communist state on German soil after World War II, West Germany tried to convince its workers of the superiority of its system by offering them an ever-expanding welfare state. And it succeeded. The main reason for the collapse of communism was the visible superiority of the living standard of the West German working classes over that of their countrymen in the East. They also wanted bananas. The GDR had not been able to afford to import bananas, and bananas were the most sought-after items that the East Germans bought in the West after they set their feet on western ground when the wall came down.

As the birthplace of socialism, Germany retains a peculiar mental kinship to socialist ideas. As the country that developed the welfare state earlier and more rigorously than other countries, it now suffers more intensely from its repercussions than have other countries. So how Germany confronts and solves this current difficulty can set a model for other countries that must grapple with these same issues, especially as welfare systems confront a historic demographic transition that will take place later in this century.

The problem of the welfare state is not only that it absorbs resources and imposes a high burden on the private market economy. It also creates distortions in the labor market, a theme which is developed in chapter 4. By offering generous replacement incomes to the unemployed, the German government was trying to make joblessness tolerable, but ended up making it too attractive, establishing high wage demands that the private sector has been increasingly unable to meet. While German firms have been facing growing competition from low-wage suppliers all over the world, the German welfare state established itself as a second competitor in the labor market. Double competition in the product and labor markets has been squeezing out more and more private jobs in Germany and has caused the rising unemployment from which the country is suffering.

The wage competition set up by the government has been a particular problem in the East German regions (Länder) that were integrated into the Federal Republic. These regions, which had been shattered by socialist mismanagement and were operating with only 7 percent of West Germany's productivity, would have needed a long period of low wages to be able to compete with the productive West German economy. However, as will be discussed in chapters 3 and 5, neither the West German system of wage bargaining nor the West German welfare state—both of which were implemented in the East overnight—allowed this to happen. As the economies of the new Länder had to compete with replacement incomes, which were adjusted to the country with the highest wages in the world, the disaster was pre-ordained. Obviously, many people preferred receiving their money from the state to working for competitive wages, especially when there was little difference between the amounts paid for working and not working.

The replacement incomes also distorted German migration patterns, a topic that is analyzed in chapter 8. Unemployment benefits kept wages high and attracted more than the efficient number of migrants. Moreover, by making wages rigid, they prevented the creation of additional jobs for the immigrants. The result was an indirect immigration into unemployment. New immigrants

took the jobs, and the existing employees took the easy chair that the welfare state was offering them.

The repercussions of the welfare state are not limited to the labor market. As will be argued in chapter 7, even Germany's demographic problems, more severe than those of any other industrialized country, might be attributed to it. Today, Germany has the lowest birth rate relative to its population among all developed countries. It is aging exceptionally fast, and the pension crisis, which most OECD countries will face within 30 years when the Baby Boomers will claim their pensions, is particularly severe in Germany.

The reason for this crisis could be Germany's leading role in establishing a pay-as-you-go-pension system. When Bismarck introduced this system in 1889, he effectively nationalized the contributions that the working generation was able to make to their parents, cutting the link between the decision to have children and the economic well-being in old age that traditionally had been a strong fertility motive. Under the influence of the pension system, Germans learned earlier than others that a decent life in old age was possible without having children, and thus they decided to reduce the number of children they had. Gradually, generation by generation, they changed their lifestyles and family plans according to the new economic environment that had resulted from Bismarck's reforms. However, the pension system itself cannot survive without children being born to replace the people currently supporting the system. Germans will therefore have to learn the hard way that their pension system has just nourished illusions of old-age security.

Things cannot go on like this. A welfare state cannot be constructed in the naive way Germany has tried. This book will clarify why, and what has to be done to overcome the deficiencies. It is neither necessary nor wise to abolish the welfare state altogether. To do so would mean throwing the baby out with the bathwater. There is an important role for a welfare state: it evens out people's chances in life, and it serves as career insurance against sheer bad luck. However, a well-constructed welfare state would not offer full-coverage social security and would avoid the distortions from which Germany is suffering by setting other conditions under which people are eligible for state support.

In some sense, Germany is the guinea pig of history. Other countries, in particular the newly emerging countries of Asia, can learn from its experience in order to avoid some obvious mistakes. Sadly, today Germany provides something of a case study of what not to do in designing a prosperous future. But who knows, perhaps a new Germany will one day emerge and provide an example of courageous social reforms necessary to rectify history's missteps.

The challenges Germany faces are shared by most other Western societies, if currently to a smaller extent. Low-wage competition by the Asian and former communist countries is a problem for all of them, and all have to find socially acceptable and economically feasible ways to maintain full employment. Likewise, all Western countries have to find ways to handle mass immigration of the poor, and all need to find answers to the reduction of birth rates and the obvious implications for their pension systems. While this book discusses these and many more problems in the German context, it is written in the hope that the solutions it offers will be of use for Western societies in general.