Blooming landscapes in east Germany?

Michael Berlemann* and Marcel Thum**

Before Soviet Leader Mikhael Gorbachev propagated fundamental reforms in the Eastern bloc, the prospect of German reunification had widely been regarded, within both east and west Germany, as a distant hope rather than a concrete policy option. When the wall came down and German unification became a realistic option, Germany was not well prepared for this enormous task. While several reunification scenarios were initially discussed, the German states opted for rapid political and economic integration. German Chancellor Helmut Kohl promised "blooming landscapes" to evolve in east Germany within a short period of time.[1] What actually has happened in the 15 years that have passed since German unification? How did the east German economy develop? We will discuss the east German convergence process, the main economic barriers to a speedier development and the future challenges for the east German economy.

Initial expectations and factual speed of GDP per capita convergence

Opinions differed about the speed of east German convergence

Given the political and economic institutions in Germany, most economists predicted steady income convergence of the "new" east German states. Compared to other transition countries, it was believed that the "new" states could immediately benefit from a well established legal framework and from massive fiscal transfers from the "old" states. However, opinions differed greatly with respect to the speed of convergence.[2]

A number of economists expected the east German economy to catch up quite quickly to the west German level. One of the most optimistic forecasts came from Willgerodt who, in a study for the German Federal Government, argued that eastern Germany might reach western Germany's GDP per capita in only three to five years (see Thimann, 1995 p. 34). Similarly optimistic, Siebert (1990) believed that the process of convergence could be completed within a period of five to ten years. The Institute for Applied Economic Research (1991) was only slightly less optimistic, expecting that eastern Germany could reach 80 percent of the west German level by 2000. A study by McDonald and Thumann (1991) came to the same conclusion.

Not all economists were that optimistic, however. Sinn and Sinn (1991) as well as Helmstädter (1991) argued that it would take a period of at least 20 years up to a generation until east Germany would be on a par with west Germany. Huges Hallet and Ma (1993) predicted 30 to 40 years for this process. Westermann (1995) expected east Germany not to reach 80 percent of the west German level before 2025. The most pessimistic forecast came from Barro and Sala-i-Martin (1991) who projected a convergence period of more than 70 years.

Figure 1 shows alternative convergence scenarios. In 1991, east German GDP per capita amounted to 42.5 percent of the west German level. Starting in 1991, we plottet various possible convergence scenarios on the assumption that west Germany's GDP per capita would have risen at a rate of 1.8 percent per annum.[3] An annual growth rate of 3 percent in east Germany's GDP per capita implies that east Germany would achieve west Germany's level in 2020. We also illustrate the earlier predictions of various economists on the convergence process. In 2004, east Germany reached 66.8 percent of west Germany's level.

* Ifo Institute, Dresden Branch.
** Technical University Dresden and Ifo Institute, Dresden Branch.

[1] Of course, one should take into account that this promise was made during the election campaign of the December 2000 Federal Election, the first all-German election since 1932. Thus Chancellor Kohl may have been well aware of his overly optimistic promise.

[2] For an overview on the various forecasts on East-West-convergence see Thimann (1996), p. 34–43.

[3] This assumption is identical to the one made by Thimann (1995). However, different from Thimann our illustration starts out from 1991.

Figure 1

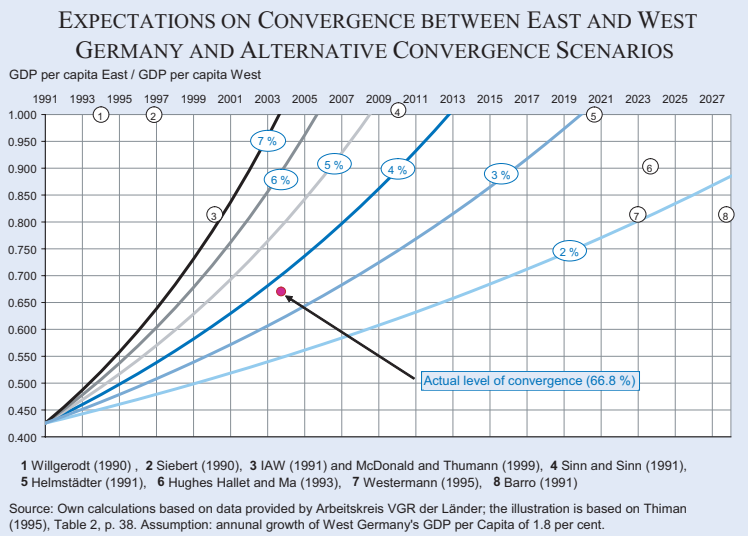


Figure 2

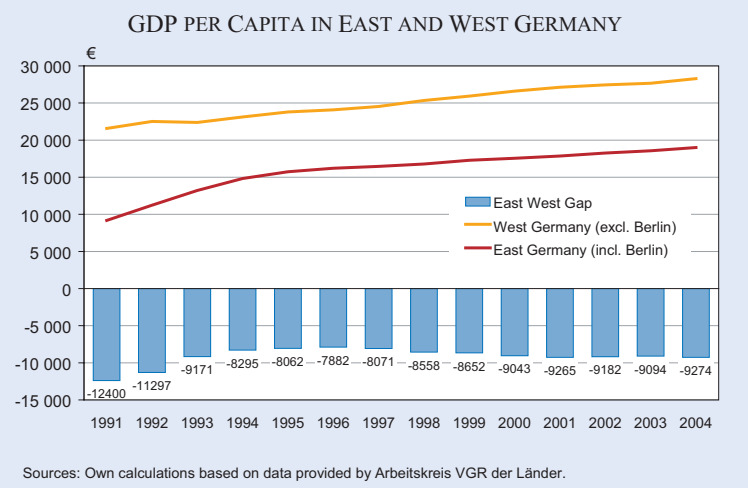
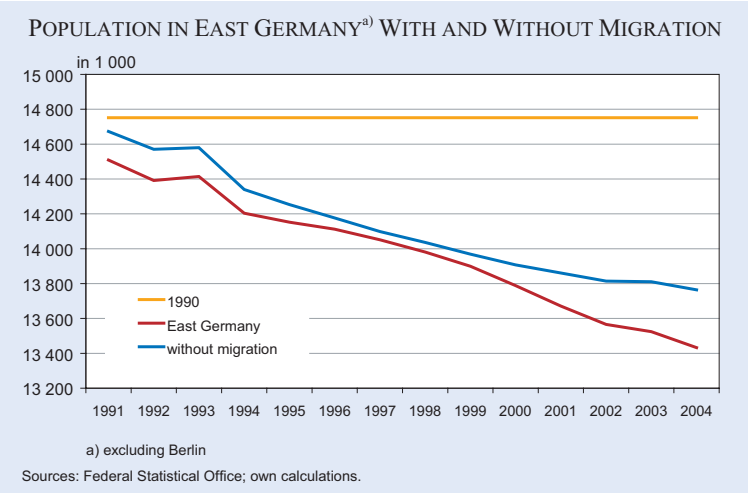


Figure 3



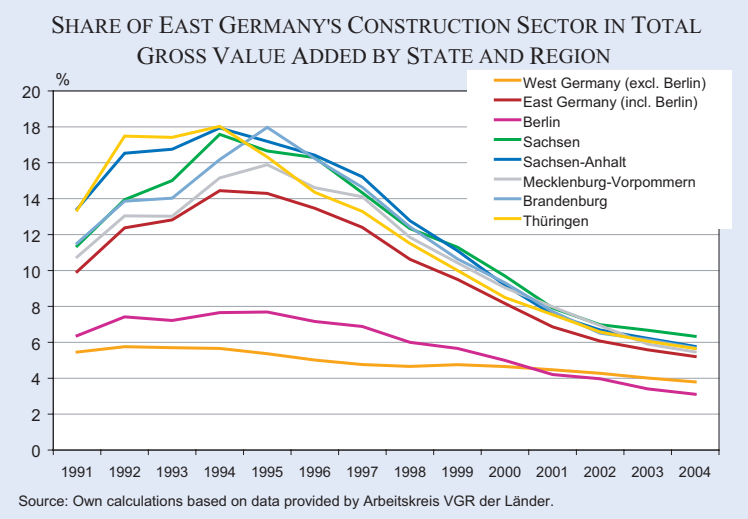
Looking at the process of convergence in recent years, one might get the impression that even the most pessimistic forecasts might turn out to be wishful thinking. Figure 2 shows GDP per capita in east and west Germany for the period 1991 to 2004. The lower panel depicts the gap in GDP per capita between east and west Germany. The early years after unification supported the belief of income convergence. The gap between east and west Germany narrowed markedly in these years. Until 1995, the difference in GDP per capita shrank by €1,000 per year or 10 percent of the initial gap; east Germany's GDP per capita reached two thirds of the western level in 1995. Since then, however, the convergence process of eastern Germany has come to a halt. From 1996 to 2004, GDP per capita grew at almost exactly the same rate as in the west. As the initial GDP level was lower, the absolute gap has grown again.

The income gap between west and east Germany has widened again since 1996

The actual gap would be even larger if account were taken of the fact that east Germany has lost a significant part of its original population. From 1991 to 2004 its population declined from 14.5 million to 13.4 million people (without Berlin). The blue line in Figure 3 presents the actual population figures from 1991 to 2004; the black line illustrates the initial population in 1990. The orange line shows how the population would have grown without migration. The remaining population decline (the vertical distance between the black and orange lines) represents the natural population growth. Births declined sharply after unification and still remain below west German levels, thus

generating a deficit of births over deaths. If population had been kept at its original level (1990), GDP per capita in east Germany (without Berlin) would be lower by roughly 1,600 € which makes up for almost 10 percent of GDP per capita. Hence, the fairly stable ratio of GDP levels since 1995 can partly be attributed to the statistical artifact of declining population in the east.[4]

Figure 5



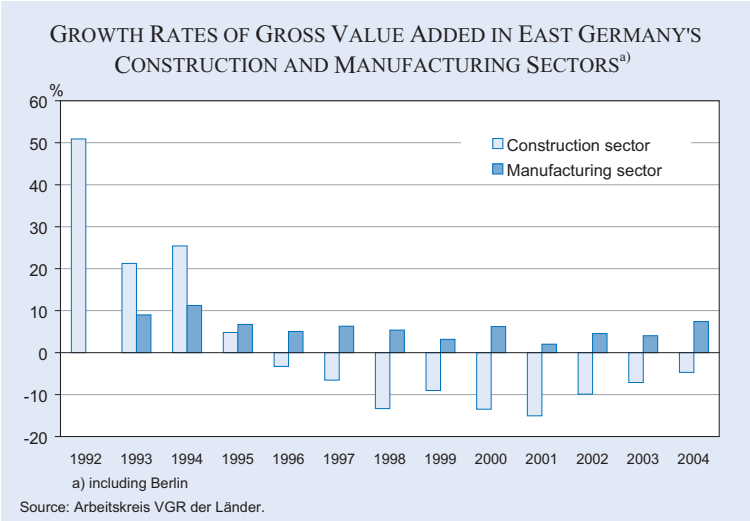
Structural convergence

The interesting question is why the initial process of convergence came to a halt in 1996. An important part of the answer is that a large proportion of the initial growth originated in the construction sector. In Figure 4 we show the growth rates of gross value added of east Germany's construction and manufacturing sectors during the period 1992 to 2004. Obviously, the construction sector experienced enormous growth during the early years after reunification thereby contributing significantly to the period of GDP convergence from 1991 to 1996. A large part of this growth was caused by public investment in the infrastructure. Moreover, generous subsidies and tax exemptions induced private investors to put large amounts of money into the renovation of buildings. During the first half of the 1990s, the share of east Germany's construction sector in total gross value added increased to more than 14 percent (see Figure 5) peaking at around 18 percent in most east German states (without Berlin). At the same time, the share of the construction sector in total west German gross value added was below 6 percent. When public and private investment in infrastructure and buildings ceased in the mid-1990s, the construction sector started to shrink. Since 1996, east Germany's construction sector has contracted in every single year. Figure 5 reveals that the construction sector in all east German states (without Berlin) is still larger than the west German average, indicating that the process of consolidation has not ended.

Since 1993, the east German manufacturing sector has grown every year

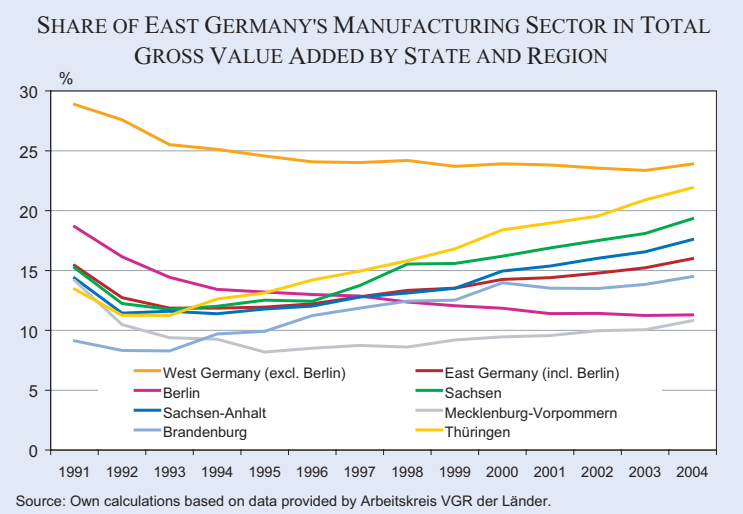
The development of the manufacturing sector was initially much slower than of the construction sector but also proved to be more sustainable. Since 1993, east Germany's manufacturing sector has grown every single year, in 2004 at a rate of 7.4 percent (gross value added). Although this growth started from a comparatively low level, the figures indicate that at least the process of structural convergence is on a good way. As depicted in Figure 6, the share of the manufacturing sector in total gross value added in most east German states is converging toward the German average.

Figure 4



[4] Of course, one has to take into account that also GDP would have been higher without the population decline, e.g., due to local demand of non-traded goods.

Figure 6

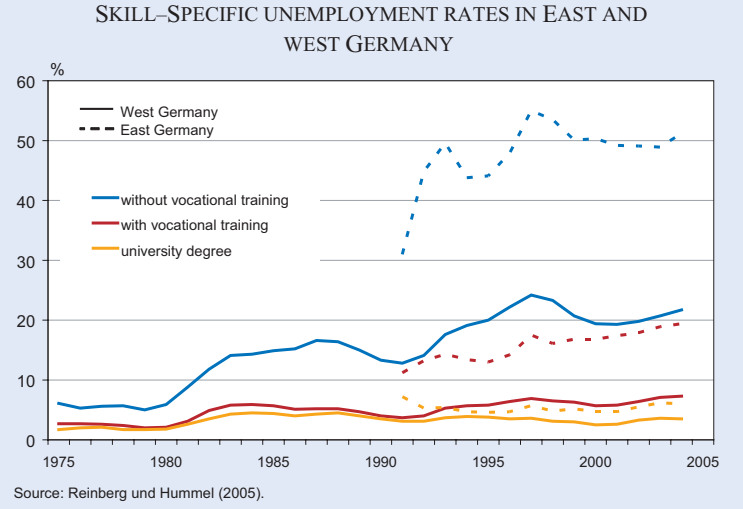


Source: Own calculations based on data provided by Arbeitskreis VGR der Länder.

Figure 7

Sources: Federal Labour Agency.

Figure 8



Source: Reinberg und Hummel (2005).

Labour markets

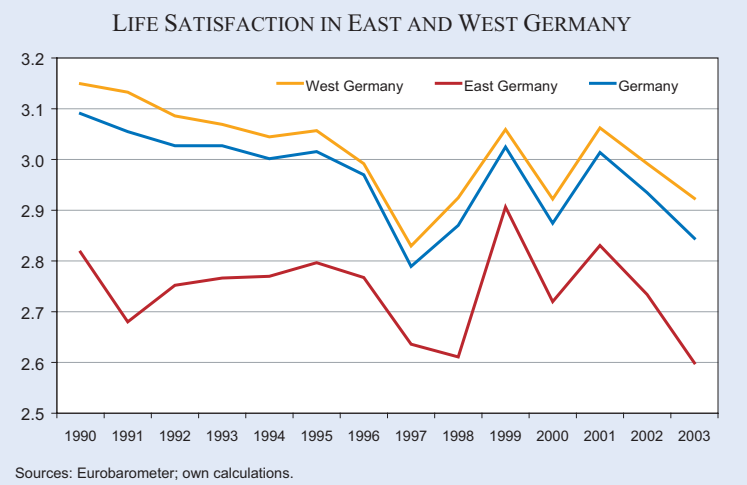
The poor growth performance of east Germany since 1996 is mirrored in the labour market. Figure 7 depicts employment (employees subject to social insurance) in east and west Germany. We take 1995 as the starting point to exclude the early, economically turbulent years after unification. West Germany shows the typical cyclical employment pattern. There was a moderate decline in the early 1990s, but when growth rates rose during the "New Economy" hype, employment returned to its initial level and then declined again. The pattern is completely different in east Germany. There employment shows a strong downward trend over the entire period. east German employment fell by more than 20 percent in ten years. The "new" states suffered a daily loss of 380 jobs.

East German employment has been declining rapidly due to rising job losses and migration

The decline in employment is accompanied by an increase in unemployment (and, at the same time, by a significant amount of migration to west Germany). The rising unemployment, however, is far from equally distributed among the population. The risk of unemployment is highly correlated with skill levels. Low-skilled workers face a significantly higher risk of being unemployed. Figure 8 shows the skill-specific unemployment rates for east and west Germany. For high-skilled workers, i.e. those with a university degree, unemployment is roughly at the natural level, and the difference between east and west Germany is fairly small. Of course, the low unemployment rate among high-skilled workers in east Germany is partly explained by the high labour mobility in this group –

and not necessarily by high local labour demand. Medium-skilled workers already face a significantly higher risk of unemployment. Their unemployment rate amounts to 7.3 percent in west Germany and more than twice that much (19.4 percent) in east Germany. Figure 8 also shows who bore the largest burden of the job losses in the past. It is the group of low-skilled workers. Even in west Germany, 20 percent of the low-skilled work force is without employment. In east Germany, however, every other low-skilled worker is unemployed. The Figure also illustrates the rapid increase in the unemployment rate from around 30 percent in the beginning of the 1990s up to 50 percent since the mid-1990s.

Figure 9



Bringing the medium-skilled and low-skilled workers back into employment is one of the major policy tasks in the near future; it could help to close the productivity gap between east and west Germany a bit further. As pointed out earlier, the disappointing performance of east Germany in terms of productivity and employment is largely home-made. Unemployment benefits and social assistance define an implicit minimum wage because almost no one would be willing to work for less than the transfer received from the welfare state. For high-skilled workers, such an implicit minimum wage is not binding and market clearing wages lead to (almost) full employment. The lower the skills, the more likely it is that the minimum wage becomes binding. Hence, the implicit minimum wage created by the welfare state explains the skill-specific pattern of unemployment in Germany. As the rules of the west German welfare state were extended to east Germany, the implicit minimum wage is almost the same as in the west. Given the lower productivity, the implicit minimum wage is responsible for the higher unemployment among low- and medium-skilled workers in east Germany. Appropriate reforms have to tackle this problem by lowering the implicit minimum wage or by reducing non-wage costs.[5]

Re-employing the low skilled is a policy priority

Conclusion and future challenges

Without question, the evolution of the east German economy has not met politicians' and economists' initial expectations. The same seems to hold true for the German population in terms of general life satisfaction, as measured by the Eurobarometer survey. It declined for both east and west Germans over the period 1990 to 2003 (see Figure 9). East Germans reported lower life satisfaction over the entire period. Since individual unemployment and one's relative income position are major reasons for dissatisfaction, this result is not too surprising.[6] While life satisfaction in east and west converged during the 1990s, recent developments go in the opposite direction – a result which is in line with the interrupted process of economic convergence.[7]

One may expect the convergence in life satisfaction to start again when economic conditions improve. The well developing manufacturing sector in several east German states gives rise to the hope that the process of economic convergence will continue once the structural adjustment in the construction sector has come to a halt.

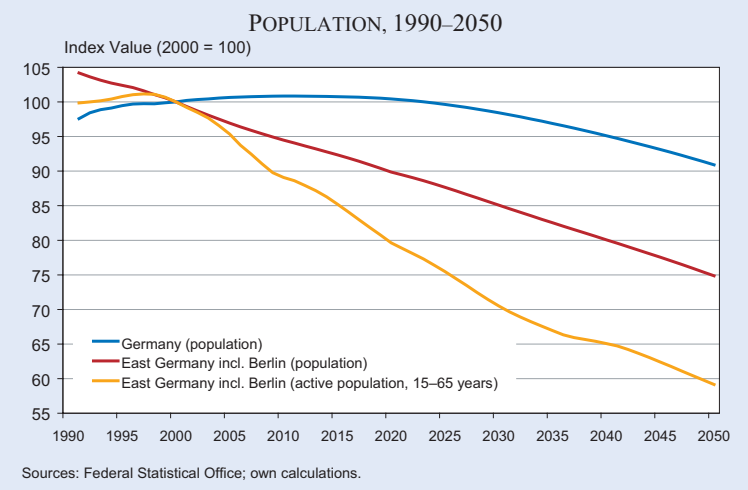
Even though there is some reason to believe that east Germany can return to a path of catch-up growth during the next decades, there are at least two major challenges for the future development of the east German economy: the consequences of the demographic change and the unhealthy state of east German public finances.

[5] For a detailed reform proposal, see Sinn et al. (2003). As the reduction of the implicit minimum wage can only be achieved by reducing social transfers, the losers in this reform have to be compensated by granting them tax credit on earned income.

[6] See Frey and Stutzer (2002).

[7] See Berlemann and Kemmesies (2004), Frijters, DeNew and Shields (2004) and Stutzer and Frey (2004) for more detailed studies of life satisfaction in East and West Germany.

Figure 10



Sources: Federal Statistical Office; own calculations.

While the total population in Germany will remain almost constant for the next 20 years,[8] east Germany will face a steep decline in its population (see Figure 10). In 2030, the east German population will have dropped to 85 percent of its 2000 level. Low fertility rates and an aging population contribute to this decline. The decline of the working age population is even more dramatic. Since the average age of the population is rising, the active population aged 15 to 65 will shrink by 30 percent from 2000 to 2030.

Why should we care? A smaller population is not necessarily a bad thing – particularly in a densely populated country like Germany. Moreover, the out-migration of workers may be an efficient reaction to better employment conditions in other German regions. For east Germany, however, it is a threatening development as it weakens its comparative advantage in knowledge-intensive production in a global economy. Given the rigidities in the German labour market, demographic change will not eliminate unemployment among the low-skilled but may create scarcity of the high-skilled – thus making east Germany less attractive in firms' location choices.[9]

A second challenge is the imbalance of public finances in east Germany. 15 years after unification the revenue sources of east German regional administrative bodies are still insufficient to finance their current expenditures. To date, a significant part of these expenditures are financed by transfers from west Germany. These funds, however, will decrease in future years. For instance, the transfers resulting from the "Solidary Pact II" (€10 billion in 2005) will be phased out until 2020. At the same time, expenditures are unlikely to be cut at this rate. Employment in the public sector will only gradually shrink to reduce the burden of the public payroll. Some expenditure categories will even increase, for instance those for public pensions of state employees. According to estimates of the Ifo Institute (Fester and Thum 2003), expenditures on pensions in Saxony will increase from roughly €50 million in 2005 to €400 million in 2020.

A shrinking population and fiscal imbalances are two major challenges

While east German politics has recognized the need for fiscal consolidation in general, it is yet unclear by which measures the expected shortfall in revenues will be met. Even if the process of convergence between east and west Germany picks up speed again, it will be overly optimistic to expect that the resulting tax revenues alone would be sufficient to generate balanced budgets in east Germany within the next decades.

[8] The population decline in Germany as a whole will start around 2013. The Federal Statistical Office expects a reduction of the German population from currently 82.5 million to 75 million. people in 2050. (Federal Statistical Office 2003).

[9] A recent study of the Ifo Institute for Economc Research (Dittrich et al. 2004)) calculates the employment gaps, i.e. the differences between labour supply and labour demand, for three different skill levels in Saxony.

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