How fast will the poor regions of eastern Germany catch up to the prosperous West? Some optimistic initial forecasts focused on the dramatic response of enterprise to the lifting of repression, but this optimism has been tempered by the recent declines in output and increases in unemployment in the East. An authoritative assessment last December by the International Monetary Fund says "...even the most sanguine scenarios envisage substantial transitional difficulties," but then considers a range of remarkably optimistic outcomes in which the East's average rate of productivity growth over the next 10 years exceeds the West's by between 6 1/2% and 9% per year. Are these realistic projections of an economic miracle, or just a rosy scenario?

The history of industrialized countries provides a lot of information about convergence between poor and rich regions. We can look, for example, at the experience of the southern U.S. in the century after the Civil War, at the economic development of southern Italy since World War II, and at the recent growth performance of Schleswig-Holstein, the poorest area of the former West Germany. Although the transitional problems for the eastern regions of Germany are not the same as those of these other cases taken individually, we can get useful information from the average experience of many different poor regions at various times.

The chart below shows the trend of real per-capita personal income from 1880 to 1988 for the four U.S. regions: East, South, Midwest and West (see accompanying illustration). The good news is that the poor regions tended to growth significantly faster in per-capita terms than the rich regions. The wide dispersion in incomes shown in 1880 had essentially disappeared by the 1980s. This process involves the catch-up of the Southern states (which became notably poor only with the Civil War) and the slow per-capita growth of some Western states (which had high per capita incomes in 1880 because of temporary opportunities in mining).

Convergence occurs within regions too: Relatively poor Eastern states (as Maine and Vermont were in 1880) tended to catch up to relatively rich Eastern states (as Massachusetts and Rhode Island were in 1880) about as fast as the average Southern state tended to catch up to the average Western or Eastern state. And convergence occurred in more recent as well as more distant periods -- the Southern states did especially well between 1940 and 1970.

The bad news from the U.S. experience is that first, the tendency toward convergence can sometimes be overwhelmed by economic or political events (such as shocks to agriculture or oil or the effects of war), and, second, convergence usually takes a long time. On average, about 2% of the gap between the poor and rich states vanished each year. This slow adjustment means that the "half-life" of convergence -- the time that it takes to eliminate half of the initial spread -- is about 35 years.

There are substantial variations in estimates of East German productivity in 1990; a reasonable range is from one-third to one-half the West German figure. An extrapolation of the U.S. experience to the eastern regions of unified Germany implies that per-capita growth in the East would be initially 1 1/2 to 2 percentage points per year higher than in the West. This growth advantage (which will decline over time as the East closes upon the West) means that it will take about 15 years to eliminate one-half of the gap, and about 70 years to eliminate three-quarters of it. If so, the East would eventually catch up to the West, but in a couple of generations rather than a couple of years or a couple of decades.

Better lessons for unified Germany may come from the history of regional growth in Western Europe. The convergence observed in the U.S. applies also to 73 regions of seven European countries (Belgium, Denmark, France, Italy, the Netherlands, Britain and West Germany). Regions with lower per-capita gross domestic product in
1950 tended to grow faster in per-capita terms from 1950 to 1985. But, as in the U.S., convergence is slow: The gap between poor and rich tends to disappear at the same rate of about 2% per year.

One part of the European story is the famous spread between northern and southern Italy. In 1950, the per capita GDP of four prosperous Northern regions was 70% above the mean for Italy, whereas the per capita GDP of seven poor Southern regions was 32% below the mean. In contrast, in 1985, the four Northern regions were 38% above the mean and the seven Southern regions were 25% below the mean. Although the North-South gap remained large in 1985 -- thus encouraging the popular view that the backward regions of the South will never catch up to the advanced regions of the North -- the reduction of the gap over the past 35 years is, in fact, in line with the usual relationship. Southern Italy had not caught up to the North by 1985 because it started far away in 1950 and the normal rate of catch-up is not very fast.

Perhaps most relevant to eastern Germany is the experience of the four regions of West Germany that had the lowest per capita GDP in 1950: Schleswig-Holstein, Lower Saxony, Rhineland-Palatinate and Bavaria. The per capita GDP of these four regions went from 23% below the West German average in 1950 to 15% below in 1985. Again, the rate of convergence accords with the usual, slow rate of adjustment.

Regional differences in per-capita incomes encourage migration from poor to rich places. The history of the U.S. provides a basis for predicting the extent of the migration from eastern Germany to the West. The extrapolation of U.S. results implies that the net migration of persons from eastern Germany to the West would be about 200,000 in 1991 (1.2% of the East's population) if the East's productivity in 1990 were one-half of the West's and about 340,000 (2.1% of the population) if the East's productivity were one-third of the West's.

The actual flow of migrants falls within this range of estimates. The flow of migrants will, however, decline over time for two reasons: first, the East's per-capita income will rise, if slowly, relative to the West's; and second, cumulated migration will cause the West's population density to rise relative to the East's, thereby making the West relatively less attractive. The combination of these two forces implies that the annual number of net migrants will fall to a range of 140,000-230,000 by the year 2001; the projected cumulative number of migrants for the period 1991-2001 is 1.7 to 2.8 million.

Per-capita productivity and income in eastern Germany can be expected to catch up to the levels in the West, but only at a slow pace. During the long transition the average per-capita growth rate in the East will exceed that in the West -- initially by 1 1/2 to 2 percentage points per year -- but the relative performance over short intervals may be better or worse than the projected amount for a variety of economic and political reasons. The transition will also feature large migrations of persons from East to West.

No doubt, the slowness of the adjustment and the substantial movement of persons will create pressures for the German government to speed up the process. There is, however, little in the history of regional growth in the U.S. and Western Europe to suggest that governments can accelerate convergence, although the Civil War and the poor growth performances of some countries in Latin America and Africa make it clear that governments can retard or reverse the process. The forces of convergence are powerful in the long run, but anything approaching parity between eastern and western Germany is unimaginable anytime soon.

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Slow Catch-Up
Real per-capita income in thousands of 1982 dollars

Source: R. Barro