GLOBALIZATION:
PAST, PRESENT AND FUTURE

Manuscript of the lecture; Part II

Globalization in Recent Times (since 1990): Facts and Trends

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II Globalization in Recent Times (since 1990): Facts and Trends

1 Breakthroughs in Communication and Transport

There is no doubt that we live in an era of drastically falling costs of transport and communication. FIGURE II.1 shows one of the few serious attempts to quantify this fall over a longer period of time, from 1920 to 2016. As to sea transport, the decline is massive, but still in an imaginable range – down to about one third in 2000 of what the costs were in 1930. Note the relatively sharp decline in the 1990s (after a longer period of stagnation), which is probably due to the widespread use of modern container technology and maybe also to low energy prices. As to air transport, the fall in costs is even more dramatic, roughly by a factor of eight, which is not surprising in view of the fact that airlines and airplanes were still in their infancy in the 1930s. As to telecommunication, however, the fall is simply breathtaking – by a factor of about 800 (!) in 2000 for a telephone call from London to New York. Even this awesome number is likely to be a vast understatement of the true cost reduction because many means of general information transmission like the internet became available not before the 1990s. Obviously, we are at the limit of quantification with respect to these revolutionary changes, which have opened up completely new options for a massive transmission of rich digitalized information.

Clearly, the decline of communication and transport costs contributed to the expansion of worldwide trade. That expansion was massive indeed. FIGURE II.2 shows the rise of the world merchandise trade volume from 1950 to 2006. Over this period of 56 years, total trade increased by a factor of 26, which amounts to an average annual compound growth rate of 6.0 %. In manufactures, the increase was even more impressive, at 7.5 % p.a. and an overall rise by a factor of 57. Of course, it is hardly possible to disentangle to what extent this massive increase was due to specific causes like the decline in transport and communication costs, trade liberalisation and/or economic growth and technical progress with its powerful trend towards ever lighter goods with an ever higher value added per weight unit (think of micro chips versus coal!). In any case, the trend was powerful and sustained, and it stood in stark contrast to the interwar period, but in long-term continuity to the developments in the 19th and early 20th century.

FIGURE II.2 also shows how trade in agricultural, mining and manufacturing products developed during the three subperiods 1950–73, 1973–90 and 1990–2006. Remarkably, the trend growth of manufactures stayed high all throughout: close to 10 % p. a. in the years up to 1973 and well above 6 % from 1990 onwards, but only slightly below 6 % in the period 1973–90 with its two oil crises and two major recessions. Apparently, a disintegration of the world economy as it had happened in the interwar period was successfully avoided even in this “bad-weather

period". Note that this is true for trade not only in manufactures, but also in mining and agricultural products. Except for a brief dip of trade in mining products (which include fuels) in the wake of the oil price hikes and recessions in 1973/5 and 1980/3, the overall trend is unambiguously upwards, though at somewhat lower rates than for manufactures.

All in all, the picture for trend growth in trade is one of "dynamic continuity", and not one of sharp breaks. If anything, however, the time since 1990 appears to have brought a slight acceleration of the trend towards trade integration. Remarkably, this shows up in all three broad categories of merchandise trade: while, as usual, manufactures have the lead, the trade in agricultural and mining products has also increased quite fast.

Among those markets that have profited most from modern communication technologies, the market for financial services holds probably the top position. This should not be surprising: after all, financial markets largely consist of a (more or less) efficient processing of information at different places, and that can be done the faster the better the worldwide network of transmission happens to be.

Telegraph and telephone started the integration of world financial markets in the 19th century. They brought enormous efficiency gains in asset trading, but also a tighter synchronisation of cyclical ups and downs with all risks that go with this. Further efficiency gains came gradually, leading to ever lower transaction costs over many decades. But a new revolution came not before the 1980s with the spreading of modern electronic equipment. Within a few years, traditional "open-outcry" trading in stock exchanges was replaced by screen-based trading. This development was accompanied by many further reforms that all went in the direction of more flexibility and less regulation of trading activity. The so-called "Big Bang" in the London Stock Exchange on October 1986 became a symbol of this trend. On that day, fixed commission charges for transactions were abolished, and with them came a vast array of further deregulations and a complete restructuring of the markets.

In macroeconomic terms, this trend was much favoured by flexible exchange rates between major currencies, which led to an increasing demand of market participants for hedging and spreading risks. In addition, ever larger pension funds searched for international assets to be included in their portfolios so that the traditionally strong "home market bias" of asset holders diminished significantly. Thus, the gross flows of capital grew dramatically and with them the worldwide diversification of portfolios, a development that was new by historical standards. Note, however, that even today there is a strong home market bias left in portfolio structures, notably in those (industrialized) countries that have a long tradition of mature financial markets. Due to many remaining national regulations and actual preferences of asset holders, institutional investors are often required to hold relatively large shares of their portfolios in domestic

assets. Hence there is still a long way to go until anything like a “perfectly” globalized capital market will be reached, whatever that may mean.

2 Trade Liberalization: From GATT to WTO

The 1990s brought the successful conclusion of the 8th trade round of the General Agreement on Tariffs and Trade (GATT). The so-called Uruguay Round had been launched in 1986, and it was finally finished in late 1993 with provisions that came up to a major step forward in international trade relations and liberalization. Its provisions mostly came into force by 1995, and they entailed four important changes:

- Recall that the GATT had been signed in 1947 as a mere treaty to be distinguished from the originally envisaged International Trade Organization (ITO), which did not come into existence because the US-congress opposed it. Now eventually, from 1995, a genuine international organization was to be created – with the name World Trade Organization (WTO), situated as was the GATT-Secretariat in Geneva in Switzerland. It was to adopt the whole GATT-based contractual framework, but have substantially more competences to be added.
- With the launch of the WTO came additional framework agreements for major areas of trade that went beyond the mere trade in physical goods. In particular, a General Agreement on Trade in Services (GATS) was concluded, just as an Agreement on Trade-Related Aspects of International Property Rights (TRIPS). These, under WTO-auspices, were important steps to cover the fast-growing service-trade (not least due to digitalization) and the many new challenges of keeping intellectual property rights adequately protected. They were mostly in the interest of the most advanced industrialized countries, in particular the United States, with their fast-growing, highly innovative information technology industries.
- In return to these concessions from the developing and newly industrializing countries (NICs), the "rich West" granted general across-the-board tariff reductions by 40 percent – from a worldwide average of already low 6.3 to 3.9 percent. More importantly, major "sensible" sectors were considerably liberalized – thus allowing massively more exports from the NICs into the highly developed part of the world. In particular, the European Union and Japan reduced subsidies to agriculture by 36 percent in the course of six years, thereby also replacing quotas by tariffs that were then committed not to be raised in the future. As to textiles and clothing, the long-standing multi-fibre-agreement (MFA) was to be phased out over a period of ten years, thus removing basically all quantitative restrictions and thus subsequently allowing almost free textile and clothing

imports into western markets, which did in fact soon lead to a massive increase of these notably from large producers like China, who became WTO-member country in 2002.

- Maybe most importantly, a dispute settlement procedure was established under WTO-rules with the deliberate aim of submitting claims of rules violations by other countries to an orderly and time-saving procedure. Roughly speaking, the newly established "dispute settlement body" was to come up with a final arbitration – when all appeals have run its course – after about 15 months, which then could be executed by allowing the country that suffered under the unjustified violation to slash retaliatory tariffs on completely unrelated goods exports of the rules-violating countries -– thus, when cleverly done, massively raising stakes in the conflict and thus giving the rules-violating country a big incentive to back down and return to orderly behaviour. More than that, in anticipation of retaliatory action, the violating party may even back down before the actual verdict. In fact, that is what happened quite often in the by now almost 500 cases of violation that have been filed so far – turning the system into a remarkable success of improving the rules discipline of trade within the WTO-framework. Note also that, over time, the plaintiffs and the indicted turned out to be different ones coming from all continents so that the system turned out to be anything but unfair and biased.

By and large, with these steps forward, the degree of rules-based liberalization reached a new dimension. That said, it also reached a first historical peak: The then following trade round, the so-called Doha Round launched in 2001, has not been concluded to this day. Apparently, at the already modestly low level of tariffs reached and ever more countries being member of the WTO – by now more than 160 countries including Russia are members with the WTO covering more than 90 percent of world trade, further progress on a multilateral basis became ever more difficult.

3 Fast-Growing Emerging Market Economies

So far, this lecture had a strong bias towards those countries that industrialized in the 19th and early 20th centuries and since then form the top of the per income league in the world. This bias is justified in the sense that it was exactly this group of countries in Europe, North America and Oceania that fuelled the dynamics of the world economy for a very long time. After all, since the relative decline of stagnating empires of Byzantium and China vis-à-vis dynamic Europe in the course of the later Middle Ages, the motor of growth and globalization was to be localized in what may be called the “Atlantic Economy”.

Since the 1990s, this has definitely changed. Sure enough, the change has roots in the further past, e. g., the arrival of Japan in the top income league by the 1970s and 1980s, and the fast

growth of a number of south-east Asian countries that started desperately poor in the 1950s, but caught up very quickly thereafter. In fact, the term "developing countries" looks increasingly out of date to describe them. Instead, the term "emerging market economies" came into use to denote those countries that grow fast and find themselves somewhere between the state of a developing and a mature industrialized country. To this group of countries, which is very heterogeneous, we now turn, with a particular emphasis on the record of their trade policies and their integration into world financial markets.

For a long time, today's emerging market economies had very high tariff walls to protect their fledgling manufacturing industries. Based on infant industry arguments from trade theory, their major policy goal was to develop a home-market oriented manufacturing sector through massive import substitution, and then release that sector – once it was big and efficient enough – into international competition. The shining example for this policy to be imitated were the United States in the 19th century, which had also protected their manufacturing industries against foreign (then British) competition.

FIGURE II.3 shows how high the tariff protection in fact was for a number of developing countries in the 1960s. As things turned out, this deliberate policy of import substitution badly failed for a variety of reasons. In particular, the expected massive economies of scale did not come about. To the contrary, widespread oligopolistic practices in all too small home markets prevented any major progress; and so did the lack of knowledge inflows and innovative impulses from abroad that are typically received only if a country actively participates in competitive world markets. This is why many countries eventually switched to a trade-oriented policy though they usually shied away from fully free trade. Some Southeast Asian countries did so in the early 1960s, Chile in 1973, Argentina, Brazil, India, and even communist China in the 1980s and 1990s. FIGURE II.4 gives a quantitative flavour of how dramatic the shift was: from the late 1980s to the late 1990s, effective rates of protection for manufacturing came down from 126 % to 40 % in India and from 77 to 19 % in Brazil.

All in all, this shift of strategy had dramatic effects on the degree of integration of developing countries in world markets. FIGURE II.5 shows that their export and import shares went up from 10–15 % in the early 1970s to 30–35 % in recent years. It also shows that this trend gained momentum in the late 1980s when more and more developing countries grew into emerging market economies with ever more open markets and an increasingly strong export performance. Today, the shift of policies towards world markets is widely regarded as a successful and important step to develop efficient manufacturing industries and to raise average productivity much faster than might have been possible if protectionism had been continued.

Remarkably, the gradual rise of world market integration of emerging market economies was accompanied by a sustained rise of international capital inflows into these countries. However,

the story of these flows can hardly be regarded as a wholesale success. Instead, it is characterized by marked ups and downs with major financial crises that have some resemblance to the experience of Germany in the late 1920s. FIGURE II.6 presents some numbers on the net flow of capital into developing countries (including emerging market economies) in four different periods from 1973 to 2012. The picture is one of violent changes. In the periods 1973–81 and 1990–98, there were massive net capital inflows as measured by very high current account deficits. In turn, the inflows dwindled in the periods 1982–89 and 1999–2012.

What was the path of events that led to these vast swings? The first cycle was mostly due to developments in Latin America where major countries like Argentina, Brazil and Mexico had built up quite a substantial foreign debt all over the 1970s. As this debt was denominated in US-Dollars, the sharp rise of the Dollar in the course of the Reaganomics in 1981–85 induced an enormous upward-revaluation of their debt burden. By 1986, about 40 countries in the world were in serious financial strains. Worst of all was the situation in Latin America as capital inflows had virtually dried up and quite a few countries defaulted on their debt. Not before the late 1980s did the situation improve when the Dollar devalued substantially in the wake of the Plaza agreement in 1985 and private American banks were bullied by the US-government to accept substantial write-offs on their outstanding loans to Mexico and other Latin American countries.

The awful crisis in the 1980s had some sobering effect on domestic economic policies. With more or less vigour, Latin American countries shifted to a restrictive fiscal and monetary policy stance, combined with large-scale privatisation and a liberalisation of foreign trade. In the early 1990s, it was in particular Argentina that embarked on a tough stabilization course by introducing full convertibility of its currency (the Peso) to the US-Dollar at a rate of 1:1 and a so-called currency board, which prescribed that the entire monetary base was to be held by the central bank in gold and US-Dollars. In fact, this harsh stabilization policy reduced galloping price inflation to 5 % in the middle of the 1990s, but it did so at the cost of a massive real appreciation of the Peso to the Dollar that made Argentine export industries suffer. Eventually, in the course of an economic downturn, the currency board was given up in 2002 after another default on outstanding debt.

Clearly, the extreme Argentine case shows what kind of dramatic consequences short-run international capital movements can have when a policy stance loses credibility. To be sure, other crises like those in Mexico and Brazil support this conjecture. Remarkably, there is one Latin American country that avoided any major crisis since the early 1990s: Chile. Why this is so remains a matter of fierce debate among international macroeconomists. However, it is noteworthy that, with the return to democracy and the establishing of an independent central bank, Chile introduced a so-called 30 %-deposit requirement on capital inflows for one year, which worked like a high penalty on short-term speculative inflows, while leaving long-term

inflows largely untaxed. In so doing, Chile may have insulated itself from violent short-term movements without shutting the door to long-term foreign capital. Whether this policy worked, and if so, whether Chile gained from this strategy remains highly controversial. Sure enough, such a policy does have a cost in the form of higher (short-term) interest rates to domestic firms. Be that as it may, however, the Chilean case did show that a small emerging market country with a still small financial market need not be condemned to become the victim of violent speculative movements of short-term financial capital.

The 1990s brought many new insights into the working of international financial markets. Most of all, the Asian crisis in 1997/8 showed for the first time that countries with a seemingly impeccable macroeconomic record were not immune to financial crises. In fact, all countries that were hit by the crisis belonged to that part of the world that was widely regarded as the top-performing area in terms of growth (see FIGURE II.7). In the five decades from 1960 to 2010, the average GDP-growth rates of Hong Kong, Malaysia, Singapore, South Korea, Taiwan and Thailand were high, between 4.1 and 5.9%. These countries had developed dynamically, some of them right from abject poverty to a moderate prosperity. In fact, they were canonical examples of how to grow into an emerging market economy by a decent policy mix: an outward orientation, high domestic savings and investment, a rising level of education and a generally stable macroeconomic environment.

In the period 1990–97, however, some of these countries ran quite large current account deficits that were financed by massive capital inflows (see FIGURE II.8). This was notably so in Thailand, which pegged its currency – as most other countries – to the US-Dollar at a fixed rate. When it faced an accelerating loss of foreign exchange reserves in the first half of 1997, it eventually devalued the Bhat (the Thai currency) by 15 %. This led immediately to massive pressures on the currencies of the neighbouring countries Malaysia, Indonesia and South Korea. Apparently, financial markets suspected some structural similarity all over Southeast Asia. In a short period of time, the "contagion effect" – as it was aptly called – drove the whole region into a massive financial crisis: sharp devaluations of local currencies via-à-vis the Dollar led to a massive revaluation of Dollar-denominated debt and thus to the danger of defaults.

Once the crisis approached its peak, there was a general recognition that, despite excellent growth performances, the southeast Asian countries suffered from a number of serious structural deficiencies. Most of all, they lacked a decent regulation of their banking systems and workable bankruptcy laws that allowed firms, once insolvent, to resume production under a new ownership, which is creditworthy. It is most remarkable that it took a major crisis to reveal to financial markets how important these deficiencies were once states of illiquidity and insolvency became widespread. Bluntly speaking, an experience of "bad weather" was necessary to make clear that an umbrella was a good investment.

The Asian crisis was very sharp in terms of credit contractions and business downturns in all countries involved. However, it was also relatively short. Arguably, this was due to the assistance of the International Monetary Fund (IMF), which was granted quickly, but under strict conditionality that entailed structural reforms, a limit to currency devaluations and fiscal consolidation packages as well as high interest rates. Remarkably, one country (Malaysia) renounced on IMF-help and instead introduced capital controls. As early as 1999, the whole region recovered and began to run substantial current account surpluses, which indicated a decisive shift towards macroeconomic prudence. In fact, the countries returned to the long-term strategy that they had pursued before 1990: high savings combined with surpluses on trade and current account (see FIGURE II.8). Until today, this strategy has not changed anymore. In its most extreme form, it is practiced in China, which nowadays runs the largest current account surplus in the world.

Until today, it is highly controversial how the Asian crisis and the reaction to it by the International Monetary Fund should be assessed from an economic and political point of view. Some prominent economists like Joseph Stiglitz are highly critical of the IMF as they view the conditionality attached to the assistance package as having worsened the macroeconomic disequilibria. Most others tend to be more cautious and point to the badly needed reforms of the national regulatory frameworks that were in fact initiated by IMF-pressure. In this sense, the crisis might be described as a pathological learning process, both for the countries themselves and for financial markets in general.

4 The Opening-Up in Central and Eastern Europe

In the late 1980s and early 1990s, communism and central planning in Europe broke down. Long before, it had become ever more likely that the self-isolation from world markets that was practiced in the Soviet-dominated parts of the continent would be doomed to fail. Remarkably, the indicators in this direction multiplied just at a time when the western world went through a bad weather-period of high energy prices, recessions and unemployment. However, it was just at the time of these crises that the western economies were steered by market forces in the right direction of a lower energy-intensity of production and technology. Nothing like that happened in eastern command economies. Thus, almost ironically, the weakness of communist ideology became apparent exactly at the time of capitalist crisis.

The political events themselves that led to the demise of communism were dramatic and fascinating, but they are not very important in economic terms. What is important, however, is a correct interpretation of the starting-points at which most countries in central and eastern Europe began their long travel back to the world market. Sure enough, these nations were not starting at the level of developing countries. In the interwar period, regions like Bohemia and

Moravia in today's Czech Republic had a per capita income comparable to that of France; and at least the more urban parts of Poland, Hungary and today's Slovakia and Slovenia were not all that much behind. The same holds for the Baltic states with their strong trading tradition that was linked to the history of the Hanseatic League. Of course, the further East, the lower the degree of industrialization and urbanisation was, though even Russia and Ukraine had been way above the living standards that prevailed in most parts of Asia and Africa.

Given this vast diversity of countries, the major economic policy tasks after 1990 were quite different in detail. Nevertheless some common elements can be depicted. Three of them stand out in importance:

- A stable macroeconomic framework had to be established, preferably with central bank independence, a balanced public budget, and a modern tax system.
- A large-scale privatization had to be carried out so as to form the basis for a decentralized market economy.
- Trade and capital movements had to be liberalized so as to re-integrate the economy into the international division of labour.

All this had to be done in a relatively short period of time so as to prevent the inevitable hardships of adjustment for the population at large from leading to whatever political backlash in terms of stalled reforms and a revival of protectionism.

This lecture is not the place to describe and evaluate this fascinating process of transformation as it goes well beyond the scope of globalization. With the benefit of hindsight, it must suffice to say that the process proceeded fast and successfully enough to turn all central and eastern European countries into something like natural players in the worldwide competitive environment that globalization entails. This is certainly so for those ten countries that have become members of the EU, but – with some qualifications – it can also be said for those nations that have grown out of the former Soviet Union and are not like the Baltic States members of the EU.

Where does Central and Eastern Europe stand today in terms of living standards and labour productivity relative to the rest of Europe? FIGURE II.9 shows some statistics for the ten post-communist member countries of the EU. Note that the left-hand column contains numbers on GDP per capita taken from standard national accounts while the right-hand column presents GDP per capita in purchasing power parity terms, all measured relative to an overall EU average, which is set at 100. The numbers show that, in all countries, per-capita GDP is still below 1/2 of the EU-average, and only in three countries (Czech Republic, Slovakia and Slovenia) above one half. The rest – from Lithuania on top to Bulgaria at the bottom – finds itself between 46 % down to 23 % of the EU-average, with the high Czech being affected by the massive

weight of its big and relatively rich capital Prague, which has vast incomes from tourism. Hence, very roughly speaking, central and eastern Europe stands between 40 and 50 % of the productivity level of the European average, but at the share of the German level the gap remains more substantial. And the variation of individual country's productivity is still large – and roughly follows the structure of pre-war times.

Is that a success or a failure? To achieve this, there is still a long way to go. On the other hand, more than two and a half decades is not a very long time span when it comes to processes of economic growth and structural change so that the macroeconomic achievements should not be underrated. This is all the more true when the actual living standard is taken into account. FIGURE II.9 shows that, in purchasing power parity terms, which reflect the lower price level of non-tradable goods in central and eastern Europe, the distance to the EU-average narrows considerably for all countries. E. g., Slovenia and the Czech Republic then reach 83 % and 88 % respectively, Hungary 67 %, Poland 68 % and even poor Bulgaria 49 %. To be sure, these levels are remarkable achievements.

Note that this process of "belated catching up" has some unique characteristics that are due to the peculiar middle position that central and eastern European countries take between the West and fast-growing Asia. As recent experience shows, these countries have been quite successful in attracting foreign direct investment of multinational companies, notably in manufacturing. However, rapid economic expansion currently leads to a rise in the wage level, which may erode part of the labour cost advantage that the region has vis-à-vis the West. In the near future, this may induce many companies to relocate the next wave of direct investments towards Asian countries that combine a growing market with a still much lower wage level. This is why the further record and performance of Central and Eastern Europe will very much depend on whether the region is able to develop its own innovative manufacturing base.

It is exactly at this point where the big policy challenge lies. In the longer run, the region must be able to generate its own innovative capacity, just like western Europe has done in the decades before. It must develop new products and processes that are able to compete under conditions of monopolistic competition in markets for highly differentiated products. This challenge will demand much more than mere "catching up". It will demand an indigenous motor of knowledge generation in private firms, public research institutions and universities as it is typical for all advanced countries.

5 A Special Case: Re-United Germany

When the Berlin Wall came down in 1989, East Germany faced basically the same economic challenges as the more advanced eastern European countries. In fact, before World War II,

the eastern German state of Saxony was roughly on the same level of industrial development as neighbouring Bohemia and Moravia that form today the Czech Republic. There was, however, one major difference with very far-reaching policy consequences: between West and East Germany, there were virtually no barriers to labour mobility. Language and culture of the people are basically the same, and no place in eastern Germany is located more than 200 km away from the former inner-German border to the West or West Berlin. Hence, right from the start, there was an enormous political pressure towards a rapid and massive improvement of eastern living conditions and productivity potentials, just to prevent a mass exodus of (notably skilled) labour from the East to the West.

As a consequence, a huge spending programme was put on to improve virtually all elements of the physical, administrative, social and educational infrastructure in the East. At the same time, massive tax incentives were provided for investment so as to motivate private firms and individuals to set up a new or modernize an old eastern stock of capital and housing. Economically speaking, it was a huge programme to supply the eastern German workers with all complementary factors of production so as to ensure that they could reasonably opt for an economic future in their home regions. At the same time, the whole eastern population was granted all standard claims within the (rather generous) German welfare state, including old-age pensions and unemployment insurance. All this added up to probably the largest fiscal reconstruction programme of the 20th century, if measured by the share of spending in GDP.

Was it successful? The answer depends on what we look. In terms of the modernisation of infrastructure in the broadest sense, it was definitely a big success. Today, it is hard to see any major difference in the quality of infrastructure between the western and the eastern parts of the country. Also, privatisation went fast, and eastern productivity growth was impressive in the early post-unification years. As FIGURE II.9 shows, GDP per capita in the five eastern German states ("Länder") in 2016 was roughly 67 % of the western German level. All this indicates that the policy did work. However, there were (and still are) dark spots as well. After all, labour productivity has not reached western levels to this day so that, clearly, convergence remains incomplete. The net balance of capital transfers between West and East, i. e. the inner-German current account deficit of the East, has been high by all standards. And unemployment in the East rose sharply and remained high until recent times (after 2005) when it began to decline sharply – parallel to the unemployment level in the West.

It is an open question whether these dark spots of unification could have been avoided with different policies. Some economists have argued that a much lower wage relative to the West would have allowed the East to follow a kind of evolutionary path of structural change in the way most eastern European countries did at that time. With the benefit of hindsight it is hard to regard this option as more than a purely theoretical idea. Until today, there is a substantial private sector wage differential between the West and the East of up to 30 %, if fringe benefits

are properly included. And that is roughly equal to the remaining East/West-gap of GDP per capita as can be recognized from FIGURE II.9. Given the ever high mobility of the German labour force between East and West, it is difficult to see how this differential could have ever been much larger without leading to massive migration. In fact, the statistics in FIGURE II.9 are suggestive about where the wage level would have been if the strategy of, say, the Czech Republic had been followed: at less than half of the present eastern German level, i.e. at about one third of the western German level. It is hard to believe that, in such circumstances, a skilled worker in eastern Germany would not have preferred to migrate to the West and search for a much-better paid job there.

Looking into the future, the challenges of eastern Germany are very similar to those of the central and eastern European countries. Like them, eastern Germany is "sandwiched" between a rich West and a poorer East, and it will be ever more difficult to attract investment into the region on the grounds of low costs. Hence it will be of utmost importance that local manufacturing industry grows fast and develops its own innovative base, in cooperation with universities and other research centres. To what extent this happens will be decisive on whether German unification may some day be called a success or a failure.