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Economic Aspects of German Unification

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I The Failure of Socialism

Germany has been unified - politically. In economic terms, though, the Wall has been replaced by a deepening rift. Monetary, economic and social union has not yet brought East and West closer together by unleashing the unifying forces of the market. There has been no repeat of the "economic miracle" of post-war West Germany. It is only thanks to a massive transfer of resources by the German state that real incomes during the first year after unification have risen. The economic divide manifests itself most clearly on the labour market: in West Germany the demand for labour has been booming while more than a third of the East German workforce have lost their jobs. This paper attempts to explain recent economic developments in Germany and considers whether there was ever an alternative to the present course of events.

The attempts made by East European countries, including the GDR, to build a more humane society and an economic system capable of competing with the market economy have failed. Many reasons can be put forward for this failure: an unbridled bureaucracy, the inflexibility of state-run firms, the inability of the ruling communist parties to reform along democratic lines, all these are undoubtedly factors which can help explain why socialist systems have failed.

At bottom, however, something else is responsible for the downfall of the centrally controlled social and economic systems: these systems have simply failed in the economic sphere. They have proved incapable of using the post-war period to draw level with the market economies or, as was originally expected, to overtake them, and of offering their citizens a greater degree of "social peace" than Western countries.

The inability of these systems to motivate people was evident at all levels, but was particularly apparent in the sphere of production. They were unable to create a climate for innovations leading to new products and production processes which, in the market economy, are generated as a matter of course by firms. It has been a characteristic feature of planned economies that they not only failed to provide incentives in this direction, but that they systematically created barriers to innovation.

The rigid framework of five-year plans prevented firms from developing innovations in the

period between two plans. Even the desperate attempt made in recent years to create incentive mechanisms at plant level has failed miserably: innovative firms were unable to translate their innovative activity into market success because both the bureaucracy - right up the planning commissions - and the firms supplying inputs to the innovative enterprise systematically blocked changes to the plans as they themselves did not benefit from rising profits from the innovation. This meant that it was only at great expense and then only in specific areas that the planned economies could reach the technological standard of the West: they were never able to do so systematically across the whole breadth of the economy.

This is exactly what distinguishes the market system; the willingness of individual enterprises (Schumpeter's pioneers) to invest, to convince others of the value of their innovation and then to translate it into market success. As the innovation gains ground, additional "pioneer" rents accrue - for a time - to all those involved. Suppliers also stand to gain and therefore have an interest in promoting the innovation.

Thus the market economy is distinguished by the willingness of all social actors constantly to revise their plans and to adapt to changing circumstances. In the final analysis it is less the efficiency of the individual enterprise than the efficiency resulting from this cooperation which makes the market economy so successful. Planned economies, on the other hand, do exactly the opposite. They fix a given way of producing and a given supply structure for a considerable period during which it is impossible to change the system or successfully to test the conditions on which it is based.

The collapse of the socialist system has come at a time in which the economic boom in the Western world during the 1980s has made it abundantly clear that the socialist countries never had a chance to catch up with the West. Until the end of the 1970s East European countries could at least console themselves with the fact that Western countries were facing serious economic problems in the form of unemployment and inflation. But the economic crisis, which for a time seemed endemic to market economies, was largely overcome in the course of the 1980s and has been succeeded by a strong economic recovery. In the 1980s there was no longer a comfortable explanation for the relative backwardness of the planned economies. It is also of note that the planned economies were no more successful than the West elsewhere in the social and political field. One of the most obvious examples here is the environment, where planned economies have done far more ecological damage than

market economies and have proved incapable of meeting this, one of the new challenges of the industrial age.

II The Transition to the Market Economy: Shock vs. Gradualism

Almost without exception the countries of Eastern Europe have begun to move away from the planned economy at a precipitous speed. At the same time, the way is far from clear in which the transition from a centrally planned to a market-based system, i.e. from centralised to decentralised control over economic activity, is to occur. With the exception of the GDR the countries of Eastern Europe have yet to take a definitive decision whether the transition to the market economy is to take place at one full swoop (shock therapy) or as a succession of small steps (gradualism). While almost all the national governments have declared their intention to move towards a market economy on the Western pattern the "shock therapy vs. gradualism" debate continues. The standard political view still seems to be that a policy based on gradualism is more easily realised, that the staged transition from one system to the other places less of a burden on the population and will minimise the adjustment problems.

This belief in gradualism contains a central conceptual error, however, The staged transition from a planned to a market economy is bound to fail because it fails to take account of the complexity and interdependence of the factors in a dynamic market context. Metaphorically speaking, gradualism implies that in a complex piece of machinery one cog begins to turn while all the others remain still. Shock therapy, on the other hand, is the attempt to start all of the cogs turning at one go. Liberalising the prices of some goods, for example, is not helpful and will fail to make the system more efficient if other prices, such as those for inputs and complementary goods, remain frozen. Under these conditions the price mechanism, the interplay of different prices, cannot work properly. The monetary reform implemented in the Federal Republic of Germany in 1948 is proof that shock therapy can be successful if the overall economic framework is right. Then virtually all prices - with the exception of rents and the prices of some food items - were liberalised at a stroke, enabling the system to make the best of its flexibility straight away. Production increased rapidly. Almost all the East European countries - and China - have tried to learn lessons from this example, but none of these countries has actually opted for such a radical shock therapy as

was implemented in the Federal Republic in 1948.

A classic case of the failure of gradualism seems to be the on-going situation in the Soviet Union. For many years now policy makers in the USSR have been trying to modify the system of central planning in a series of marginal reforms. Even now that the transition to the market economy is the declared aim of the government the authorities are not prepared to go the whole way, but are persisting in their attempts to save elements of the planned economy. The failure of this experiment is now apparent. Why is it then, it might be asked, that the economic situation in countries - such as Hungary, Poland, Yugoslavia and Czechoslovakia - which have been bolder in implementing market-oriented reforms is so extremely precarious. In seeking an answer to this question it may be helpful to consider a hypothetical case in which a country opts for a radical shock therapy. Or, to look at it another way, was "1948" in the Federal Republic of Germany just an historical accident, or what were the concrete macroeconomic conditions under which this unique experiment - the overnight transition from one system to another - could be successful? Is the "economic miracle" of the Federal Republic merely a mirage shimmering before the eyes of other countries which they can never reach.

What happens on the first day of a radical shock therapy? In purely theoretical terms, the shock transition from the planned to the market economy has - given suitable macroeconimic conditions - only one effect: a rise in the price of a number of goods. It is necessary to examine this statement more closely.

One of the fundamental insights gained by liberal economists from their observations of the war economy of the Third Reich was that centrally planned and administered economies can only function if they allow inflation to occur or actually use it as an instrument of economic policy[2]. This may seem paradoxical in view of the fact that in economic systems of this type the price level is usually almost constant, as the authorities lay great stress on the fact that nominal wage increases are not devalued by price rises. But this only means that "open

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[2]. Cf., for example, W. Eucken: "Deutschland vor und nach der Währungsreform" (Germany before and after Monetary Refom), and F. A. Hayek, "Vollbeschäftigung, Planwirtschaft und Inflation" (Full-employment, the Planned Economy and Inflation) in, A. Hunold (Ed.), Vollbeschäftigung, Inflation und Planwirtschaft, Erlenbach-Zürich, 1951.

inflation" has not occurred and does not preclude the phenomenon known as "suppressed inflation". In such economies inflation does not manifest itself in rising prices but in the fact that there is too much money chasing too few goods. Planned economies can only sell their products if there is a permanent overhang of purchasing power. This purchasing-power overhang - an excessive money supply - can only occur if wages and other forms of income in monetary terms do not correspond to the supply of goods which households would also demand if they were free to choose. As the economy functions behind closed borders, consumers do not have this freedom to choose. Labour productivity, as measured, is thus necessarily false because it includes goods which in the quality and quantity offered would not be demanded by consumers if they had the choice.

It is possible to express this causality another way. Because the planned economy is unable to respond to the preferences of customers with sufficient sensitivity or, alternatively, to generate preferences as firms in the market economy do, it is only able to sell its - qualitatively poor and quantitatively insufficient - products by creating a monetary overhang. This is achieved by paying - measured against the consumer demand of the population - excessively high wages, i.e. wages which exceed not measured productivity, but potential (real) productivity. The relatively high wages create the impression of a relatively high real income level, a level which, however, does not exist in reality as a glance at the supermarket shelves suffices to show. This is a specific form of money illusion generated by planned economies and one which manifests itself in long queues and the hamster-like mentality of consumers. It is only under conditions of total isolation from the outside world and an excessive money supply that this extreme form of a sellers' market can possibly function.

This money illusion bears a heavy price. The fact that the relatively high real wage level comes about not only as a result of high nominal wages but also due to the massive subsidisation of the prices of certain goods (the so-called "second wage-packet") leads to allocative distortion on a huge scale. This results in resources - such as water, energy and food - being wasted and is also reflected in the endless queues and hamstering by consumers common in such economies. Even more important, however, is that the economy can only support such "living above one's means" by cutting back net investment. The standard of living is only as high as it is because the devalorisation of buildings, the depreciation of the capital stock and the environmental costs of production are not reflected in the prices of consumer goods. It is only when market forces are introduced and subsidies are reduced that

the obsolescence of the machine park and the real standard of living are revealed.

Returning to our hypothetical model, the price rises which accompany the transition period to the market economy, beginning on the first day, are not themselves inflation. They merely indicate the extent to which the planned economy has suppressed inflation in the past. The price rises accurately reflect supply and demand conditions on the markets. In other words, what used to be expressed in queues now manifests itself in rising prices.

What is decisive for the success or failure of the transition process is how the population reacts to this new development. Obviously the rise in prices following the introduction of the new system is almost certain to be interpreted as a cut in living standards. This is the central error of the whole process of transition which then gives rise to the central problem facing economic policy. What has actually happened in the transition from the planned to the market economy is not a reduction in living standards, but a revelation of the existing standard of living, and its expression in market prices. In real terms, i.e. in terms of the volume of goods, the change of system alters nothing. Stocks of goods, the factors of production, everything is as it was. At t+1 the economy has exactly the same amount of goods and services at its disposal as at t-1. All that the market economy reveals is that the old system had considered itself richer than it was because it had not taken account of just how poorly its products compared to those in the West. An additional factor is, of course, that the fact that goods were persistently unavailable in planned economies represents a restriction on living standards which was in no way reflected in statistical comparisons between East and West.

The abrupt transition to the market economy is merely a precondition for flexibility and entrepreneurship to make their positive effects felt - e.g. by reducing costs - in the longer term. Cost reductions will ultimately lead to lower prices, to higher real incomes and so to an increase in disposable purchasing power in the hands of economic actors. The positive supply-side shock does not make its effects felt on day t+1, but, as the "economic miracle" in West Germany has shown, given a suitable macroeconomic framework it can help to overcome economic stagnation in a relatively short space of time.

III The Consequences of Shock Therapy

Usually, however, the price rises which succeed the transition to the market economy are interpreted not as a one-off phenomenon but as inflation and as a cut in living standards. This in turn has the effect of creating a strong pressure in the aftermath of the transition to adjust wage levels to compensate for this apparent drop in the standard of living. The resulting increase in wages means either that corporate profits, and with them the level of investment, fall dramatically, or that the rise in wages is passed on to prices, leading to on inflationary pressure in the coure of the couse of the unavoidable and necessary changes in relative prices. In this way the one-off effect of the initial price rises is perpetuated in an inflationary process. Normally, under such circumstances the external value of the currency cannot be maintained: the economy enters a vicious circle of inflation, wage increases and currency devaluation which can only be broken with the blunt instrument of a restrictive monetary policy. This has been the pattern of adjustment in almost all the smaller East European countries. None of them have succeeded in making it clear to economic actors, and in particular to the trade unions, that the initial price increases would be a one-off phenomenon and that price stability could be expected in the short run as soon as the supply of goods begins to rise. If, on the other hand, the vicious circle is broken with the help of monetary policy, living standards will inevitably sink substantially - for the first time in this scenario - and unemployment will rise dramatically.

Even in the market economy there is no cure for high interest rates resulting from a restrictive monetary policy. There is not a government programme nor a retreat on the reform-policy front that can prevent real incomes from falling and unemployment rising. The danger for the continuing reform efforts in these countries is that this trend is usually interpreted as a necessary by-product of the transition to the market economy. What is misunderstood, is that the secondary shock of the restrictive monetary policy has nothing to do with the transition from one system to the other. It is a perfectly normal, negative demand shock such as that experienced by Western economies following the oil-price shock and the significant shift in relative prices in the mid, and again in the late 1970s.

It is all but impossible for the East European countries to escape from the spiral of inflation, wage rises and currency depreciation without help from the West, particularly in view of the fact that a great many additional problems of the transition period have yet to be solved. This is true not only of the reorganisation and reorientation of the administrative apparatus but also at a more personal level in terms of individual initiative and

entrepreneurial spirit. The thorniest problem at the microeconomic level is undoubtedly the difficulty of transforming the formerly state-run enterprises into private companies. So far not a single country has succeeded in privatising a significant proportion of its formerly state-run enterprises. They lack the capital to privatise the industries themselves successfully and, for political reasons, they are seeking to avoid a total "sell-out" of their capital stock to the West.

At the same time it would be a mistake to place too much emphasis on these microeconomic barriers. Capital and entrepreneurial motivation can only be mobilised if the macroeconomic framework is right. On the basis of the scenarios sketched above the economy as a whole simply cannot be expected to generate a profit: it is not possible to mobilise capital without expectations of profit.

None of these factors, which seem so pathological in the context of Eastern Europe today, were true of the Federal Republic of Germany in 1948, neither on the micro nor the macroeconomic side. In 1948 West Germany's entrepreneurial tradition was still alive, there was private ownership of the means of production, a market-economic tradition which had been only briefly interrupted and the state bureaucracy was far less firmly ingrained in people's minds than after forty years of socialism. The macroeconomic conditions, in particular, were fundamentally different:

- Incomes policies were extremely moderate, accepting the initial price rises and not allowing them to lead to additional wage increases. Even the subsequent sharp rise in profits was accepted by the trade unions as a normal phenomenon consistent with the very steep trajectory of the upturn;

- Throughout the 1950s interest rates in West Germany were extremely low. Given the extremely high elasticity of supply on goods markets and stable prices, monetary policy was very generous, and indeed it had no reason to pursue a more restrictive course.

The macroeconomic framework was of vital importance for the success of the West German reform process in the 1950s. It is to misunderstand the nature of the so-called "economic miracle" if the extremely favourable conditions - in terms of both monetary and incomes policies - for the free play of market forces are not taken into account. These conditions will

not be repeated in the East European countries in the foreseeable future.

IV East Germany Takes a Different Path

One of the reasons why the situation facing the countries of Eastern Europe is so intractable is that - again in contrast to West Germany after 1948 - they have long resisted the idea of "external price reform" to match the process of internal price reform already agreed. By this is meant convertibility of the currency and thus exposure to competition on world markets. Even if East European countries are willing to take this step, they face yet another dilemma: if they opt for a very low exchange rate, giving their firms the chance to compete on the world market, the consequent sharp rise in import prices will exacerbate the problem of domestic inflation. If, on the other hand, they choose a high exchange rate, their companies will be exposed to competition on both domestic and foreign markets, posing a grave threat of rising unemployment.

From a purely economic perspective at least, the first option represents the only viable path, as it gives enterprises a chance gradually to adjust to conditions on the world market and reduces the danger of a severe adjustment shock resulting from the lack of competitiveness. Given that inflation already poses a major problem during the transition period, though, most countries simply have not succeeded in making their currencies (largely) convertible. Instead they have opted for limited convertibility in an effort to contain the pressure from the world market while avoiding stoking up further inflation. Unfortunately, this also means that the stimulus of world competition and the advantages of integration into the international division of labour are also partly lost. This problem is exacerbated by the fact that Western countries have with few exceptions kept their borders closed to Eastern Europe and thus have artificially reduced the incentives for Western entrepreneurs to invest in these low-wage countries.

East Germany, the former German Democratic Republic, has chosen a completely different path altogether. From the very beginning the political situation and the high mobility of labour within Germany as a whole meant that the GDR was forced to go its own way. Very early on it became clear that the GDR could convince its population to remain within the country if a radical transition was made to a market system. What was far from clear at the

beginning was that the GDR would also choose an extremely high exchange rate in order to keep the inflationary shock down and real incomes up. But it was very soon after the Wall came down that the view gained ground in the GDR that monetary union between the GDR and the Federal Republic could be a way of stemming the migration of qualified labour out of the country and catching up quickly with the Federal Republic. This has had dramatic consequences.

As has already been mentioned, all the countries of Eastern Europe are confronted with a trade-off between higher incomes via lower import prices on the one hand and the danger of rising unemployment on the other. Faced with this dilemma the GDR rapidly and unequivocally opted for an extremely high exchange rate, and thus for high real incomes and against full employment. The high exchange rate resulted from the fact that monetary union effectively meant that all current transactions were converted at a rate of 1 GDR Mark = 1 D-Mark. This despite the fact that at the end of 1989 the previous regime had decided that all internal conversions within the GDR were to be conducted at a rate of 4 GDR Mark = 1 D-Mark. In other words, the transition process to the market economy in the GDR was accompanied by other, secondary developments, namely the transition to a (very) hard currency.

The positive supply-side shock of the transition from the planned to the market economy was thus countered by an appreciation shock whose dimensions were historically unprecedented. Appreciation shocks have two prime consequences: firstly, they cheapen imports so that the real incomes of economic actors in the country in question are higher than they would be at a more "realistic" exchange rate; secondly, given open borders and full currency convertibility, the appreciation means that domestic products cannot be sold at home or abroad in sufficient quantities to maintain full employment. Here again a glance back at the situation in West Germany in 1948 is very instructive. If the Federal Republic had not opted for a low exchange rate - the rate was then four D-Mark to the dollar - but had opted for monetary union with the USA or an exchange rate of 1:1, the "economic miracle" in the Federal Republic would certainly never have occurred.

Similarly, in East Germany it was not only the transition to the market economy which caused unemployment to rise sharply in the first three months after monetary union; it was the fact that the negative demand shock caused by currency appreciation more than offset

the positive supply-side shock resulting from the transition to the market economy. The conceptual mistake made by many politicians was all too glibly to project the experiences of the currency and economic reforms of 1948 in the Federal Republic onto conditions in East Germany. Many observers believed that it would be enough merely to introduce a market-economic framework - irrespective of the actual form it should take - and an economic dynamic would be released.

The motor behind West Germany's economic growth during the 1950s was the export sector, the expansion of which was facilitated by the low external value of the D-Mark and almost constant unit wage costs over a long period. During the same period, the domestic economy was protected by trade barriers. Moreover, in the aftermath of the war the other European countries were at about the same stage of development and real income levels as Germany. The Federal Republic did not lag too far behind its most important trading partners in terms of productivity and competitiveness.

The new economic order, it was thought, would also permit the East German economy to shift over to a steeper growth trajectory and so to reach a real income level comparable with that in the West in the medium term. Private entrepreneurship freed from the bounds of the planned economy, a non-punitive tax system and the financial strength of West Germany to provide the necessary infrastructure were to furnish the basis for the economic upturn. It was expected that productivity could be substantially raised in the very short term merely by removing supply constraints in the production process and by making more efficient use of raw materials. These measures, together with the aim of exposing the hidden unemployment endemic to the previous system led observers to believe that considerable scope was available for an increase in productivity and a reduction in costs in the short run. In theoretical terms, using a traditional diagram showing macroeconomic supply and demand curves, the introduction of the market economy should shift the supply curve for the economy as a whole to the right (positive supply shock). This would lead to a fall in prices with a simultaneous increase in the volume of transactions. This - naive - view has been shown to be completely false. The comparison between the recent situation in the GDR and that prevailing in the early years of the Federal Republic failed to take account of the central difference in initial conditions facing the two economies.The introduction of the D-Mark in the GDR in July 1990 represented an currency appreciation for East Germany as an economic region of more than 300%. This appreciation shock made its effects fully

felt as, following the opening of the borders, the industrialised countries were able to supply the East German market without suffering from significant capacity constraints in their domestic economies.

Corporate competitiveness in East Germany deteriorated further due to rapid (two-digit) wage and salary increases which were in no way matched by the rates of productivity growth: costs were reduced as inputs became cheaper, corporate taxation was reduced and manning levels cut, but this was either insufficient - or had little practical effect due to the extent of the fall in output levels - to reduce unit costs to any significant degree. Indeed, the opposite occurred: productivity per employee fell substantially during the second half of 1990, while costs were on the increase. Moreover, irrespective of cost considerations the clear preference of East German consumers for Western products inevitably exacerbated the problems of dwindling demand facing East German firms.

Many commentators observers and policy makers gave the impression that monetary, economic and social union, introduced July 1st 1990, i.e. the conversion of all current transaction, including wages, at a rate of 1 DM:1 GDR-Mark either made economic sense or was covered by West German "solidarity" - i.e. the willingness to transfer resources to East Germany. At the same time, policy makers were counting on the introduction of the market economy to release a dynamic thought to be lying dormant in East Germany. It is here that the decisive inconsistency in political decision-making lay. The path chosen - liberalising market forces - would have been a plausible strategy if the level of wages and costs in East Germany had been lower or - given higher wages - if sufficient "solidarity" (i.e. financial aid) had been forthcoming from the West. In actual fact policy-makers opted for relatively high wages in the new federal states without securing a sufficiently high level of solidarity in the West. In other words, the way in which monetary, economic and social union was implemented in practice entailed the implicit decision to push through with the process of economic unification even at the cost of a split in labour markets. As a result the adjustment costs were largely borne - not for the first time - by the unemployed, while German society as a whole sought to escape with only a marginal reduction in its living standards.

The consequence of monetary, economic and social union for East Germany was a dramatic fall in the volume of domestic output. Real gross domestic product (the sum of gross value added in the various branches of the economy) fell between the second half of 1989 and the same period in 1990 (on six-month averages) by a quarter. Within a few months of monetary union net industrial production[3] had fallen by almost half on the previous year's figures (cf. fig. 1). Output also fell drastically in mining and, initially, in the construction sector, for which many had forecast a major boom immediately following monetary union, due to the poor state of repair of infrastructure and the housing stock in the GDR. This initial decline in construction happened because the uncertainties surrounding future economic trends, the persistent disputes about ownership rights, and the inadequate provision of local government in East Germany with financial resources and qualified staff caused the majority of existing construction projects to be frozen and planned investment not to be implemented. Moreover, the contraction of economic activity was not confined to the industrial sector: in retail and wholesale trade and the transport sector output also fell; by more than 20% on the previous year. The decline was equally severe in agriculture and forestry which, in the period immediately following monetary union, had trouble finding buyers for their products at any price. Only in the service sector did gross value added in 1990 exceed the previous year's levels. These branches were, however, too small to prevent the dramatic fall in overall GDP.

The collapse in output during the second half of 1990 was largely a result of losses on the domestic market. The level of exports was held stable during 1990 by massive export subsidies for trade with the former CMEA countries. When the measures implemented to support trade with Eastern Europe expired (mostly at the end of 1990) large shares of East Germany's foreign markets were also lost. In the first quarter of 1991 the value of goods exports to the CMEA countries was 50% down on the same period the previous year. Overall goods exports during the first half of 1991 were one third lower than for the same period in 1990. This loss of export markets led to a further collapse in industrial production at the turn of the year (1990/91) by more than 30% within the space of 2 months (cf. fig. 1).

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[3]. In 1989 the industrial sector accounted for about 47% of East Germany's gross value added.

To a considerable extent the positive demand effects emanating from East German incomes, stabilised at a relatively high level by government transfers from West to East, benefited the West (rather than the East) German economy, which was already operating at close to full capacity. The end of the 1980s saw an economic boom in West Germany, this from an already high production level, and rapid employment growth: during the first half of 1991 the West German employment level was almost 2 million higher than three years previously.

The driving force behind the boom in the "old" Federal Republic was the sharp increase in demand from abroad and, subsequently, from East Germany. If, as dictated by the logic of separate national accounting statistics for East and West Germany, West German goods sold in East Germany are counted as exports then total exports so defined rose by one third between 1988 and 1991. The only other component of total output to achieve growth rates of this magnitude was investment in equipment, but this is largely to be seen as a reflection of the increase in foreign demand, and this item, anyway, accounts for a far less important proportion of GDP than do exports. Private consumption, on the other hand, did not make a substantial contribution to economic growth until 1991 in the wake of a substantial programme of tax cuts. The consumer-oriented sectors of the West German economy were the prime beneficiaries of the boom in West Germany. The food, drink and tobacco industries, the consumer-good industries and retail and wholesale trade profited greatly from the boost to demand from East Germany. In the winter months of 1990/91 the food, drink and tobacco industry increased its output by almost 20% on the same period 12 months earlier. Consumer-good producers increased their level of output by more than 8%. The investment-good sector, on the other end, recorded growth of only 4.5% because of the sharp fall in foreign demand from mid-1991 on[4].

Due to the high levels of capacity utilisation in West German industry and the marked slowdown in the rest of the world economy, overseas firms increasingly penetrated the German market. During the winter months of 1990/91 the volume of imports rose by about 15%. Stagnating export growth and the boom in imports brought about a dramatic change in Germany's trade balances. At the beginning of 1991 the (overall) German current account

[4]. Source: Statistical Supplement to the Monthly Report of the German Bundesbank, Row 4, seasonally adjusted figures, June 1991.

went into deficit for the first time since 1981; in April the balance of visible trade also went into deficit for the first time. Of course these changes have been reflected in shifts in the capital balance: Germany will have to become a net importer of capital in order to pay for the goods it imports. All the same, there is no need to view the fact that the trade balances have gone into deficit unduly dramatically.

The deficit on current account is - just as the text books predict - the direct consequence of the growth differential between West Germany and the other industrialised countries, on the one hand, and the structural competitive weakness of the East German economy on the other. Given the inadequate level of capital formation in East Germany the problem of East Germany's lack of competitiveness can only be solved by importing capital with the aim of creating a modern industry offering secure jobs. This means that, during the reconstruction phase at least, the new federal states will necessarily be a net importer of capital.

In such a constellation the only way to avoid a current account deficit for Germany as a whole would be to accept a marked slowdown in West German economic growth. A restrictive monetary policy or the rapid consolidation of the fiscal deficits could have been implemented so as to cut domestic absorption such that imports increased at the same rate as exports. But this would have weakened the vigour of the West German economy, and West German economic strength is a necessary condition for financing the reconstruction of East Germany. Rejecting such a "solution" to the "problem", and in view of the overall state of the world economy, the current account deficit must be accepted as a necessary evil in order to meet the excess demand on goods markets.

It would be a mistake to see the current account deficit in the context just described as indicating a loss of international competitiveness on the part of the West German economy. The public debate in Germany, periodically rekindled and oscillating around phrases such as "fundamental competitive weakness", "technological deficiency", "excessive tax burden" and "living below our means" does not even approximate to the current situation as far as West Germany's competitive position is concerned[5]. During the years prior to German unification the Federal Republic had been "living above its means" to an incredible extent. Even if the

[5]. Cf. International Comparability and the Usefulness of Indicators of Competitiveness, DIW report commissioned by the Federal Economics Ministry, Berlin 1991.

recent political changes had not occurred, a reduction in West Germany's trade surpluses would have been necessary in order to reduce the disequilibria on world goods and capital markets. The revolutionary changes in Germany and the reactions to them by policy makers have made net capital imports all but inevitable. In addition, it must be recognised that it is only thanks to the enormous increase in imports that the inflationary threat posed by the boost in demand from East Germany could be largely averted. The potential conflict of aims between an increase in employment and a rise in inflation was avoided, as befits an open economy, by increasing imports and running down the surplus on current account.

The economic unification of the two Germanies has provided the West German economy with an unexpected demand boost at a very favourable point in time, while it has pushed the East German economy, which in any case was in a precarious position, deep into crisis. In the short term this displacement of demand from East to West (not just to West Germany) is a zero-sum game in which one side gives with one hand what it takes with the other. Within both "regions" of Germany, though, major changes in income distribution have occurred and there has been - irrespective of the economic collapse in the new federal states - a massive redistribution of resources from West to East. Real incomes in East German rose substantially during the first 12 months of monetary union[6].

It is only in the medium term that the transition from an inefficient to an efficient economic system in East Germany will provide new and, on balance, positive impulses for the Germany economy as a whole. Now that the East German economy has plunged so deeply into crisis it will take a long time before it can lock into the economic dynamic in Western Europe without outside help. Given this dependence of West Germany it is a mistake - albeit a common one - to believe that East German would begin to catch up if only the pace of growth in West Germany were to slow[7]. Only if the West German economy is operating at full steam can capital - both public and private - be mobilised for reconstruction in the

[6]. Cf. Income and Consumption in the Private Households of the New Federal States, in, Wochenbericht des DIW, No. 29/1991.

[7]. The Prime Minister of the state of Saxony, Kurt Biedenkopf, for instance, replying to the question how the "stopping train East" and the "intercity West" could be brought closer together, was reported as saying: "then the intercity will have to travel more slowly!".

new federal states. A growth slowdown in West Germany could lead to the cancellation of planned investment projects in East Germany and thus slow the "stopping train East" still further. Moreover, "pure" redistribution from West to East, i.e. an actual reduction in living standards in absolute terms in the West to enable them to be raised in the East is certain rapidly to go the willingness of West German citizens to show "solidarity" with their East German cousins.

VI Two German Labour Markets

The divergence in economic trends in East and West is particularly evident on the labour market, where political and economic unification have, far from leading to a harmonisation, actually widened the gap between the two economic regions. The former GDR, where full employment had been one of the state's major policy aims for 40 years, experienced almost overnight the all but total collapse of its labour market, while the old Federal Republic was chalking up the best labour market statistics for decades.

The dimensions of this breach in the labour market can be illustrated with the following statistics. Whereas in the second half of 1990 the level of employment in West Germany rose by 800 000 (3.1%) on the previous year's figure, the number employed in East Germany fell by 1.3 million or 14%: in manufacturing industry, which used to employ some 40% of the workforce, employment fell by almost 20%. Job losses of such an order of magnitude in sectors and branches which were no longer competitive, and which were not compensated by job creation in other sectors to any great extent, have led to a dramatic increase in unemployment. One year after monetary union, registered unemployment had reached about 840 000, an unemployment rate of 9.5% (cf. table 1).

The scale of the collapse of the labour market is, however, understated by the unemployment figures. A comprehensive labour market analysis for East Germany must also take into account the widespread use of short-time working and the specific way in which the Labour Promotion Law (Arbeitsförderungsgesetz) has been applied in the former GDR. The provisions of the Unification Treaty concerning short-time working provide that state benefits are to be made available even where the lack of orders is not of a temporary but of a long-term nature or where redundancies could be avoided. Short-time working,

considered as an instrument of labour market policy under this provisions, cannot be compared with that in West Germany. Short-time working in East Germany is often tantamount to unemployment.

By the end of June 1991 the two million employees on short-time working were performing on average only 44% of regular working hours. In September 1990 the figure had been 56%. Not only is average working time per short-timer declining, the duration of short-time working for the individual employee is increasing. In June two thirds of all short timers had been on short time for longer than 6 months, and a further 28% between three and six months. Converting the short-time figures into "full-time unemployment", the unemployment figures would be more than 1 million above current levels. Taking this "full-time equivalent" into account, the corrected figure for the unemployment rate (April to June 1991) rises to about 22% (cf. fig. 2).

VII Labour Migration and Wage Differentiation

Although both the demand and supply sides of the labour markets in East and West Germany continue to develop along diverging trajectories, this does not mean that they can be explained independently of one another. The hinge linking the two labour markets is the migration of labour from East to West Germany. This movement - consisting both of actual migration and those merely "commuting" across the former border - means that in future it will be all but impossible to devise strategies for one labour market without having to consider the reaction of economic variables affecting the other.

The existence of a large number of potential migrants - in the following both actual migrants and "commuters" will be subsumed under the one term - is having a significant effect on wage and salary trends in East Germany. The "propensity to migrate" within Germany is - in view of the lack of language problems, the relatively high social acceptance of migrants in West Germany, and the extremely low costs involved - very high. This fact must then be set against the background of the extremely unfavourable economic situation in the new federal states.

Average monthly incomes in East Germany (average for the second half of 1990) were just

under DM 1 400; in West Germany about DM 3 500. Average incomes in the new federal states were thus only about 40% of those in the West. Add to this the considerably less favourable labour market perspectives and it is hardly surprising that substantial numbers of East Germans have opted to migrate to the West. Unfortunately, it is extremely difficult to ascertain the precise extent of migration as East German citizens moving to West Germany have not been registered since the borders were officially opened. Provisional estimates for 1990 suggest about 150 000 persons of working age may have switched domicile form East to West. To this must be added about 200 000 "commuters" (year's end 1990). By the middle of this year the number of "commuters" working (but not living) in West Germany had climbed to 350 000.

In the longer term it is important to distinguish between the two forms of labour migration as they have different effects on investment in East Germany. The permanent migration of labour could prove to be a crippling millstone around the neck of the East German economy if the lack of skilled labour were to prove an obstacle to investment. Even when the economic situation in East Germany improves substantially, it is unlikely that workers who have shifted their life-focus and perspectives to West Germany will then return.

This risk is not so acute in the case of "short-term migration", i.e. commuting between home in East and work in West Germany, as ties remain to the place of domicile. Moreover, commuting of this type cannot be conceived simply as a reduction in the supply of labour in East Germany and thus an easing of the pressure on the labour market there. Employment in West Germany goes some way to reduce the loss of "human capital" which unemployment would otherwise occur. Increasingly employees from East Germany are receiving training from West German employers in the use of modern technology. This amounts to a transfer of technical know-how from West to East Germany, at least if workers subsequently gain employment in their home area. For these reasons such temporary migration is to be welcomed as a positive trend.

The substantial rise in East German incomes in recent months has frequently been justified with reference to the (potential) migration of "human capital". This argument, together with citation of the economic law which says that only one price is possible for an homogeneous good in a single market, wage and salary increases of 30% within the space of a year (average for the second half of 1990) have been sanctioned. Wages are set to increase even

more rapidly during 1991, namely by about 60%.

A central question facing economic policy makers is whether such increases in linked labour markets can be interpreted as the result of market forces and, as such, should be accepted. This is the case when - broadly speaking - the extent of labour mobility is sufficient to explain the margin by which the rate of wage increases has exceeded the rate of productivity growth. If, on the other hand, these wage increases are not the product of market forces but rather an expression of the fact that the trade unions have been able to exploit the power vacuum on the employer side and the general state of public opinion to push through excessive pay demands, economic policy makers must expect that additional support and subsidies for the East German economy will merely encourage the unions - without them having to worry about additional sanctions from the labour market - to seek an even more rapid upwards adjustment of wages to West German levels. If the latter hypothesis is shown to be correct the state would be well advised to suspend such aid, to subvert the unions' wage-adjustment strategy through labour market sanctions, and to end the "moral hazard" constellation for the unions.

The course of events in 1991 seems to have made a strategy of this sort necessary. A closer look at labour market developments, namely, reveals that the interpretation of the rapid upwards adjustment of East German wags to West German levels as a result of market forces simply does not hold water. A pure market model works something like this: if the borders between two countries with different capital resources, labour productivity and wage level are opened at an exchange rate which serves just to stabilise the level of output in both countries (i.e. one which has no effect on competitiveness) then, to the extent that labour is mobile, labour will migrate from the low-wage to the high-wage country. This migration causes a shortage of labour in the low-wage country and a labour surplus in the high-wage country. This will tend to bring wage levels into equilibrium, exerting upward pressure in the low-wage, downward in the high-wage country, which forces marginal firms in the low-wage country out of business and leads to the creation of new productive capacity in the high-wage country. What is important for the evaluation of this constellation is the supply and demand trends on the labour market. Clearly, the mobility of labour ensures that persistent unemployment occurs in neither the high nor the low-wage country; especially in the low-wage country, which is characterised by a labour shortage and not excess labour supply and unemployment. The fact that there wage growth is temporarily decoupled from

productivity growth is a reflection of a shortage of labour and - under market conditions - cannot go hand in hand with unemployment.

This leaves us with only one possible conclusion regarding the current labour market situation in Germany. The introduction of monetary union, i.e. an exchange rate of 1:1 for all current transactions, effectively set a wage level in East Germany which incorrectly evaluated the willingness of those living in the new federal states to migrate. The leap in unemployment in East Germany indicates that the wage level so fixed was unnecessarily high given the actual extent of potential labour mobility. An exchange rate and thus a wage level appropriate to the actual "propensity to migrate" would have led to a labour shortage in East Germany.

Even if it is the case that this initial error was unavoidable at the time for various reasons, the mobility argument cannot offer an explanation for the persistent divergence of labour market trajectories in East and West. A fall in unemployment in West Germany, despite immigration, and rising unemployment in East Germany, despite emigration, requires - according to the rules of the market - rising wages in West and falling wages in East Germany, in order to bring competition on goods markets, and, as a consequence, the labour market perspectives of both regions more closely in line. Of course this mechanism is no way to prevent migration[8]. By the same token it is simply incorrect to say that a rapid upward adjustment of wages would put a stop to migration when it is clear that the low-wage country is uncompetitive on goods markets compared with the high-wage country and that this is the main cause of unemployment there.

A much more plausible explanation for the rapid wage increases in East Germany than the mobility argument is the view that an effective labour market simply did not exist in East Germany immediately before and after monetary union and that the trade unions have been successful in their attempts - in highly centralised bargaining processes - to exploit the power vacuum on the employer side. It can scarcely be maintained that such a power vacuum does not exist. The entire process of unification, and in particular monetary union, would have been impossible had there had been an effective body representing employer interests in

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[8]. It should be added: because markets do not bring quantity adjustments to a standstill but rather they tend to lead to similar demand and supply conditions on all markets.

East Germany. If it is recalled how much resistance West German employers mobilised in the 1960s and 1970s against currency appreciation of just a few percentage points, then it is clear that monetary union, with its effective appreciation of over 300% would have been a non-starter if a private corporate sector had existed. In many ways this is a paradoxical constellation. The rapid transition of the autarkic GDR economy to a market economy with a hard, convertible currency and open borders and thus the rapid process of political unification in Germany was only possible because private firms, one of the essential prerequisites for a market economy to function, did not exist.

VIII Capital and Labour in Germany

Monetary, economic and social union has laid bare the competitive weakness of the economy of the former GDR. Over the decades the autarky and misallocation characteristic of the planned economy in the GDR meant that neither from within nor without was sufficient pressure brought to bear on the economy to ensure steady investment at a high level, to extend and modernise the capital stock. Compared with Western industrialised countries the East German machine park is antiquated and unproductive. It was only possible to continue production with this capital stock because the GDR did not have to compete on the world market.

A small, open economy - and East Germany since monetary union is a classic small, open economy - can only be competitive on world markets if wage costs per unit of output are less than the world-market price.

This statement tends to surprise the economic layman; there are after all other, seemingly much more important components of total costs - the costs of inputs, capital and imports. Yet it remains the fact that in an international comparison, it is only wages which count. At the level of the national economy, namely, inputs and fixed capital are clearly also the result solely of human labour, albeit in a different unit of output, or in an earlier period of time. Imports, finally, raw materials and financial capital, cost the same all over the world - given open markets - and thus do not affect the prices of goods between countries. What remains then is the cost of the immobile factor of production, labour, and the efficiency with which it is used in production, i.e. labour productivity. Given fixed exchange rates, then,

competitiveness is determined by wage costs per unit of production.

An economy with low labour productivity can therefore only sell its products on the world market if its wage costs are correspondingly low. If the wage level is high, then productivity too must be high in order to be able to pay high wages by selling competitive products.

The East German economy is, seemingly, confronted with a dilemma. On the on hand, a high wage level would seem to be necessary in order to prevent migration and the associated loss of "human capital". Equally, lower wages would seem to be required to enable East German firms to regain competitiveness and to set in motion a process of self-sustained growth.

But is it really the case that a low wage level and low labour migration are incompatible? If this were the case then the decision to migrate would be merely a function of the difference in wage and salary incomes between East and West Germany. The literature on labour migration, however, does not see current income differentials per se as being one of the prime motivating factors. What is decisive for the decision to migrate is the expected level of incomes in the future. This means that the probability of obtaining a given income in a particular job is of prime significance. In other words, even in the context of a high overall wage level, expected income can be low if the chance of gaining employment is low and/or if unemployment is high.

The fundamental misappraisal of the motives behind labour migration in the German case lies in the fact that low wages alone are perceived as the trigger for the decision to migrate. But this is to ignore the effect of the drastic wage rises since monetary union on the level of employment. Rapid pay rises have stabilised incomes in absolute terms but they have also weakened the competitive position of East German firms by sharply raising unit wage costs. During the second half of 1990 unit wage costs rose 20% faster than those in West Germany. The competitive position of East German industry is set to weaken again considerably during the course of 1991. The effect of wage increases on expected incomes - i.e. wages multiplied by the probability of employment - cannot be determined a priori. Whether expected incomes rise or fall following a rise in wages depends on the extent to which the demand for labour reacts to the same wage rise. Given the state of the East German economy it is to be expected that the demand for labour will be very sensitive to

changes in wage rates. In other words, rising wages can cause the demand for labour to fall to such an extent that the decline in the probability of employment more than offsets the rise in wages, so that expected incomes actually fall.

High wage increases cannot stop the migration of labour from East Germany. They reduce the income disparity between East and West, but only at the price of reducing the demand for labour in East Germany. The resulting unemployment reduces expected incomes, the decisive parameter for the decision to migrate.

At the same time, it would be an exaggeration to place the entire blame for unemployment in East Germany at the door of the trade unions and their pay policies. Even at a lower wage level a large number of firms would not have been producing competitive products. Still, lower wages would have enabled some firms to survive, giving them the chance and the time to adjust to changing circumstances. Moreover, obstacles to investment such as the lack of an effective infrastructure cannot be overcome overnight: they must be taken as given by firms in their cost calculations for some time at least. In the short term the only variable which can be altered to compensate for the unfavourable production conditions is the level of wages. However, given the political and social environment immediately before and after monetary union, this instrument remained unused. The consensus of opinion which emphasised the importance of a uniform wage level in East and West Germany was so strong that those who warned against a superficial analysis of the problems went unheard.

The question remains whether, taking the upwards adjustment of wages in the new federal states as given, a strategy based on the motto "attack is the best form of defence", i.e. a programme of massive public support for capital investment is the only solution now available. But this approach soon comes up against financial and other constraints. If it is assumed that the wage differential between East and West will melt away relatively quickly, this will require the rapid development of a capital stock which - in terms of capital and labour productivity and the labour-capital ratio - matches the West German machine park. This implies an average capital investment per industrial job of some DM 250 000. The industrial sector of the GDR employed slightly more than 3 million workers. Although industrial employment as a share of the total will decline in the longer term - compared with this figure - if similar employment structures are to be established as in West Germany, the industrial sector will have to provide jobs for over 2 million workers. At DM 250 000 per

employee, this implies a capital stock of approx. DM 500 billion.

Direct investment in the new federal states for 1991 is likely to run to about DM 20 billion. Given the low level of investment by existing East German firms the total volume of investment will be well below DM 50 billion. In other words, given rapid upward wage adjustment, a massive increase in fixed capital spending would be necessary in order to achieve the economic basis necessary to support the level of wages within a decade. This rough calculation does not, of course, take account of price rises and the continuing increases in capital intensity in the West during this period. Capital formation in East Germany itself will account for only a tiny fraction of the volume required, as domestic investors and the existing firms in the new federal states can expect very little in the way of profits during the transition period. West German industrial currently firms invest about DM 120 billion per year in West Germany itself. It is, to put it mildly, extremely difficult to see how an additional DM 50 billion per year over a period of ten years for East Germany, an area with at most one tenth of the economic potential of the West, is going to be mobilised.

IX Spurious Solutions

Faced with the dramatic economic problems in East Germany a whole range of suggestions have been put forward to resolve the dilemma between outward migration due to income differentials and that due to rising unemployment. One is wage restraint in West Germany with the aim of stabilising the labour market. This line of argument is, however, based on a theoretical model in which, due to the mobility of labour, the prices for labour tend to equalise. This would imply slower wage growth or even wage cuts in West Germany. Such models are not able to explain wage movements and labour migration due to the different capital endowments of the two regions (a difference the models fail to take into account) and the resultant, seemingly paradox situation that a high-wage area possesses a significant competitive advantage over the low-wage region. For these reasons it would be impossible to achieve lower rates of wage growth or wage reductions in West Germany in the long run. They would, on the one hand, initially reduce the existing wage differential, while, on the other, leading to a reduction in unit wage costs; and the resultant scope for price cuts would exacerbate the competitiveness differential, the competitive advantage of the high-wage over

the low-wage region. This would have the effect of reinforcing the diverging trajectories of labour market developments. A reduction in migration - which, as we have seen, is not only a function of wage differentials - would therefore be an extremely unlikely result of such a strategy.

Nevertheless, it should not be concluded from wage trends in Germany as a whole that the principle of centralised, free collective bargaining (Tarifautonomie) has failed. It is simply that immediately before and after the introduction of monetary union the essential preconditions for collective bargaining to work effectively - autonomous negotiating partners with equal rights and of equal strength - were not given. In view of the power vacuum on the employer side, the state, as the owner of most of the firms (in the guise of the Treuhandanstalt), ought to have taken on an active role on the employer side. This would not have represented state intervention in free collective bargaining, but rather the appropriate response in view of the nature of property relations at the time.

In Germany the principle of free collective bargaining has been an extraordinary success story. The stability of the D-Mark and the competitiveness of the West German economy on international markets are primarily a consequence of the negotiating process between employers' associations and trade unions, in which the negotiating parties have consistently shown a high degree of responsibility with respect to the overall state of the economy. In no way can the principle of "Tarifautonomie" in the Federal Republic be seen as "an encumbrance on the market economy"[9].

A further proposal - the use of wage subsidies - aims to drive a wedge between net wages and wage costs: firms' unit wage costs would be lower income expectations higher, reducing the pressure to migrate. However, closer analysis shows that this seemingly attractive solution entails serious drawbacks.

The proposal would be truly attractive if it meant that workers in East Germany would begin earning the same wages as in West Germany while at the same time firms - in terms

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[9]. "Wage and Labour-Market Problems in the New Federal States", Report by the Scientific Advisory Council to the Federal Ministry of Economics, manuscript, July 14th 1991, p.25.

of present wage levels - were relieved of a significant proportion of their cost burden. A few simple calculations suffice to show that this represents an extremely costly solution, placing an immense strain on the willingness of the West to cushion adjustment in the new federal states and tying up enormous reserves of capital which would then no longer be available for investment. Moreover, solutions based on wage subsidies do not resolve the moral hazard problem of the trade unions mentioned above and thus run the risk of inducing additional, even higher wage increases.

All the same, any one of the various wage-subsidy variations under discussion[10] would be preferable to the policy currently pursued by the Treuhandanstalt of granting liquidity guarantees. In principle this means that firms still owned by the Treuhandanstalt are effectively receiving wage subsidies but without firms actually benefiting from a direct reduction in their costs. The Treuhandanstalt merely guarantees loans: the firms are then able to take out loans with which they pay the full level of current wages. If the firms fail they can resort to the state guarantee to pay back the loan. To this extent the costs of these "wage subsidies" will arise later without any immediate positive effects except that some firms are enabled to stay afloat.

The conclusion to be drawn from the above is clear. The strategy of rapid wage adjustment is too heavy a burden for the Federal Republic as a whole to bear. It is inconceivable that the state can provide transfers to the extent required over such a long period without going beyond it financial limits in one form or another. If all the various actors involved do not accept the need to rethink policy in this matter in the very near future than the experiment called "Monetary, Economic and Social Union" will have to be considered a failure.

X. Conclusion

This outcome begs the question whether there was ever an alternative to the "unification experiment". This is not only a very difficult question, in many ways it is of purely academic

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[10]. Akerlof, George A. and Andrew K. Rose, Janet L. Yellen, Helga Hessenius, East Germany in from the Cold: The Economic Aftermath of Currency Union, Brookings Papers on Economic Activity No. 1 1991, Washington D.C.

interest. It is no longer important to determine in retrospect whether - and if so under which external conditions - the GDR could have taken its own path to community with the Federal Republic, but rather whether - and if so how - the citizens of the GDR could have made the adjustments necessary to travel down such a path. Any experiment of this type would inevitably have failed had the population not been prepared patiently to accept that it would take a not inconsiderable period of time in order to overcome the relative backwardness of the East German economy. The fact that many would not be sufficiently patient under any circumstances is a fact that no-one can change. The decisive political mistake which was made was the belief that the realisation of monetary, economic and social union alone would put a stop to the pressure to migrate. By forgetting that the "impatient ones" would not wait whatever the circumstances, false expectations were raised among the "patient ones". Instead of making efforts to explain the nature of economic processes, politicians indulged in wishful thinking. Where warnings against setting expectations too high would have been in order, East German citizens were promised "gifts". Emotions were stirred where what was needed were cool heads.

Monetary union and the rapid political unification of the two German states may have been inevitable and, in the final analysis, the right option. The way it was implemented in practice, however, was plagued by false analysis and inconsistency. Little attempt was made in both East and West Germany to explain to people the economic implication of such a step in such a way that they themselves could have foreseen the consequence of their own actions. This was particularly necessary where, after 40 years of economic confusion, scarcely anyone was in a position to comprehend what opting for the D-Mark as the common German currency really meant. Of course the majority of East Germans thought that this was the fastest way of achieving West German standards of living. Unfortunately the fact that a mere exchange of currencies will not bring this about - and indeed in some ways can even make it more difficult - is not something that was mentioned at the demonstrations or during the election campaign.

From the point of view of democratic legitimation, too, the results of the process of German unification are ambivalent. Although during the course of last year East German citizens were able to vote in free and fair, democratic elections, they did not have a real choice. They were never presented with clear, comprehensible programmes, the consequences of which they were able to evaluate themselves. Democracy means more than setting out

procedural rules. It is a necessary condition of democratic elections that voters have some idea of the options before them. In the normal run of gradual political and economic change this may be taken as given without specific efforts on the part of the body politic. It is not, however, the case in times of fundamental socio-economic change.

Table 1
Selected Labour Market Indicators for East Germany

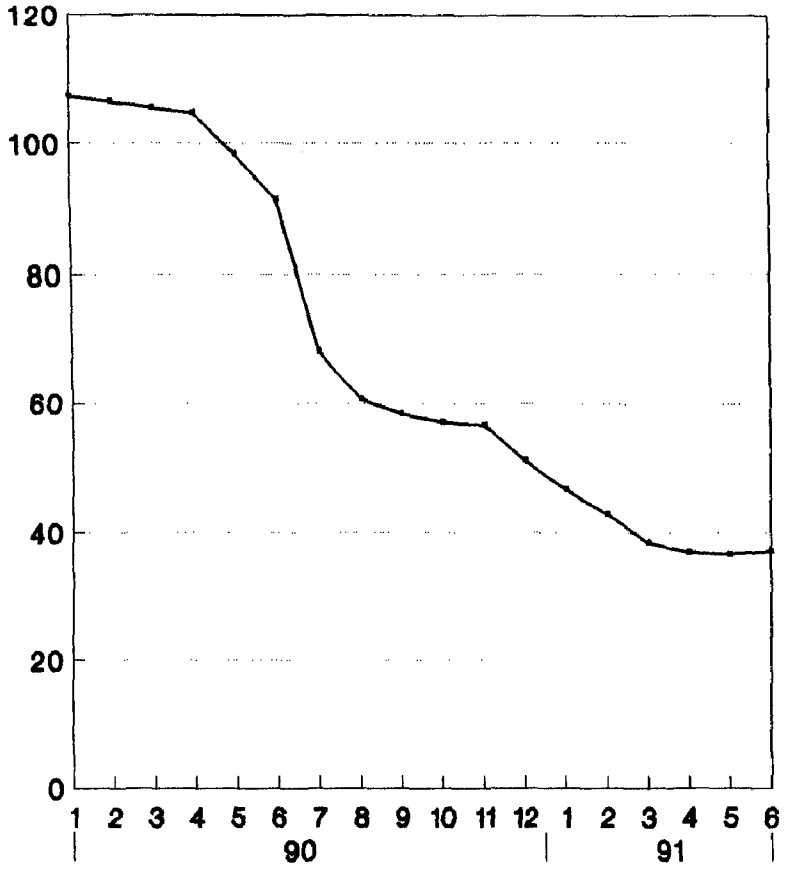
	1990 July	Aug.	Sept.	Oct.	Nov.	Dec.	1991 Jan.	Feb.	Mar.	April	May	June
Unemployment												
Stock, end of month	272017	361286	444856	536800	589178	642182	757162	786992	808349	836940	842285	842504
Inflow	132042	106999	107052	121896	93990	95402	174327	92810	91189	109366	78682	81785
Outflow	2121	17730	23482	29952	41612	42398	59347	62980	69832	80775	73337	81566
Female unemployment as percentage of total unemployment	51.6	53.2	55.0	54.2	54.6	54.8	54.8	54.7	55.2	56.1	56.6	57.3
Unemployment rate	3.1	4.1	5.0	6.1	6.7	7.3	8.6	8.9	9.2	9.5	9.5	9.5
Vacancies												
Stock, end of month	27728	20426	24289	24737	23781	22624	22963	20788	20879	22854	25327	31733
Vacancy rate in percent of labour force 1)	0.32	0.23	0.27	0.28	0.27	0.26	0.26	0.24	0.24	0.26	0.29	0.36
Unemployed to vacancy ratio 2)	10	18	18	22	25	28	33	38	39	37	33	27
Short time working												
Stock, middle of month	656277	1499872	1728749	1703782	1709899	1794032	1840639	1947059	1989815	2018907	1968477	1898937
Average reduction of working time	.	.	43.5	44.3	46.4	48.3	52.0	54.5	55.5	55.4	56.0	56.8
Unemployment rate corrected for short time work	.	.	13.5	14.7	15.7	17.1	19.5	20.9	21.8	22.2	21.9	21.7

Source: Federal Labour Office.

1) The corresponding rate for West Germany in June 1991 was 1.2 p.c.- 2) The ratio for West Germany in June 1991 was 5 : 1.

Figure 2

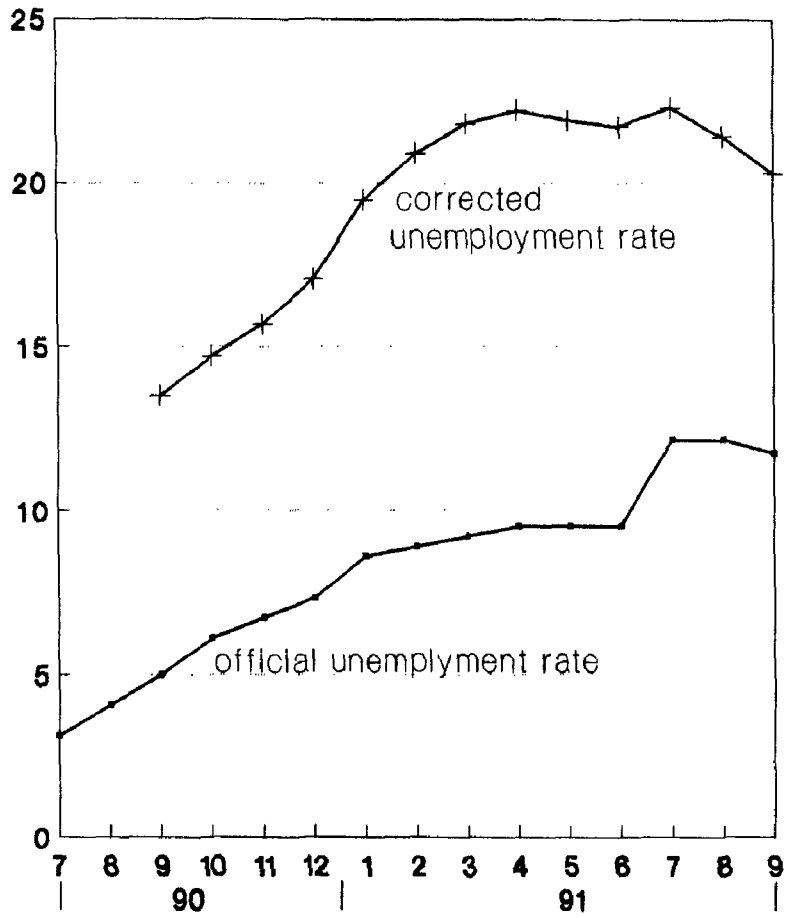
Index of Net Manufacturing Output
Seasonally adjusted; 1985 = 100



Sources: Federal Statistical Office,
DIW calculations

Figure 1

Official and Corrected Unemployment Rate in East Germany



See text for explanation

Appendix 1
Federal Republic of Germany
Key National Accounts Data
Forecast for 1991 and 1992

	1990	1991	1992	1990		1991	
				1st half	2nd half	1st half	2nd half
1. Components of GNP							
a) % change on previous year							
Employed labour force	-0.6	-3.0	-1.5	0.3	-1.5	-3.0	-3.0
Hours worked	-3.0	-5.5	1.0	-1.3	-4.9	-7.0	-3.5
Labour Volume (by calendar month)	-3.7	-8.5	-0.5	-1.0	-6.4	-10.0	-6.5
Productivity 1)	7.0	9.0	2.0	4.8	9.4	10.5	7.0
Gross domestic product at constant prices	3.0	0.0	1.5	3.7	2.4	-0.5	0.0
b) 1000s							
Employees	37 259	36 105	35 595	37 453	37 065	36 285	35 920
Unemployed	2 111	2 685	3 170	2 052	2 170	2 535	2 830
Unemployment ration (in %)	5.4	6.9	8.2	5.2	5.5	6.5	7.3
Short time workers	813	1 880	1 095	74	1 553	2 065	1 700
2. GNP by type of expenditure at current prices							
a) DM bill.							
Private consumption	1 466.8	1 564.0	1 655.5	705.2	761.5	754.5	809.5
Government consumption	516.8	559.5	597.5	240.0	276.8	259.5	300.0
Fixed capital formation	556.9	619.0	679.5	283.3	295.7	290.5	328.5
Machinery and equipment	254.5	285.5	312.5	117.5	137.0	133.5	152.0
Construction	304.4	333.5	367.0	145.7	158.7	157.0	176.5
Change in stocks	15.7	42.5	27.0	15.6	0.1	24.5	18.0
External surplus or deficit	105.8	23.0	45.5	65.3	40.5	17.5	5.0
Exports 2)	840.0	822.5	903.0	422.1	418.0	410.0	412.5
Imports 2)	734.2	800.0	857.5	356.7	377.5	392.5	407.5
Gross National Product	2 664.0	2 807.5	3 004.5	1 289.4	1 374.6	1 346.0	1 461.5
memo item:							
Current balance	65.7	-32.5	-3.5	45.6	20.1	-15.0	-17.5
b) % change on previous year							
Private consumption	7.3	6.5	6.0	7.0	7.6	7.0	6.5
Government consumption	6.6	8.0	7.0	5.9	7.2	8.0	8.5
Fixed capital formation	11.3	10.5	10.0	11.7	11.0	10.5	11.0
Machinery and equipment	13.3	12.0	9.5	14.8	12.1	13.5	11.0
Construction	9.7	9.5	10.0	9.4	10.0	7.5	11.0
Exports 2)	3.5	-2.0	10.0	5.0	2.0	-3.0	-1.5
Imports 2)	8.5	9.0	7.0	7.7	9.3	10.0	8.0
Gross National Product	5.3	5.5	7.0	5.7	5.0	4.5	6.5
3. GNP by type of expenditure at prices of 2nd half of 1990							
a) DM bill							
Private consumption	1 473.7	1 508.5	1 526.0	712.2	761.5	736.5	772.5
Government consumption	538.8	543.0	545.5	262.0	276.8	266.5	276.5
Fixed capital formation	563.4	597.0	623.5	267.8	295.7	283.0	314.0
Machinery and equipment	255.2	280.5	299.0	118.3	137.0	132.0	148.5
Construction	308.2	316.5	324.5	149.5	158.7	151.0	165.5
Change in stocks	28.4	47.5	25.5	28.2	0.1	32.0	15.5
External surplus or deficit	104.6	22.0	44.0	64.1	40.5	18.0	4.0
Exports 2)	843.1	813.5	861.0	425.1	418.0	411.5	402.5
Imports 2)	738.5	791.5	817.0	361.1	377.5	393.0	398.5
Gross National Product	2 708.9	2 718.0	2 765.0	1 334.3	1 374.6	1 335.5	1 382.5
Memo item:							
Domestic expenditure	2 604.3	2 696.0	2 720.5	1 270.2	1 334.1	1 317.5	1 378.5
b) % change on previous year							
Private consumption	5.5	2.5	1.0	5.5	5.5	3.5	1.5
Government consumption	2.5	1.0	0.5	1.9	3.1	1.5	0.0
Fixed capital formation	7.2	6.0	4.5	7.8	6.6	5.5	6.0
Machinery and equipment	11.8	10.0	6.5	13.2	10.6	11.5	8.5
Construction	3.6	2.5	2.5	3.9	3.4	1.0	4.0
Exports 2)	3.2	-3.5	6.0	4.5	1.9	-3.5	-3.5
Imports 2)	8.6	7.0	3.0	8.6	8.5	9.0	5.5
Gross National Product	2.9	0.5	1.5	3.5	2.4	0.0	0.5
Memo item:							
Domestic expenditure	4.4	3.5	1.0	4.5	4.2	3.5	3.5

Appendix 1 continued
Federal Republic of Germany
Key National Accounts Data
Forecast for 1991 and 1992

	1990	1991	1992	1990		1991	
				1st half	2nd half	1st half	2nd half
4. GNP by type of expenditure: price level of national expenditure (2nd half of 1990 = 100) % change on previous year							
Private consumption	1.7	4.0	4.5	1.4	2.0	3.5	5.0
Government consumption	4.0	7.5	6.5	3.9	4.0	6.0	8.5
Fixed capital formation	3.8	4.5	5.0	3.6	4.1	4.5	4.5
Machinery and equipment	1.4	2.0	2.5	1.4	1.3	1.5	2.5
Construction	5.8	6.5	7.5	5.3	6.4	6.5	6.5
Exports 2)	0.2	1.5	3.5	0.4	0.1	0.5	2.5
Imports 2)	-0.0	1.5	4.0	-0.8	0.7	1.0	2.0
Gross National Product	2.3	5.0	5.0	2.1	2.5	4.5	5.5
5. Factor incomes in GNP a) DM bill.							
Income from employment	1 476.5	1 570.0	1 677.0	700.4	776.1	728.5	842.0
Gross wages and salaries	1 212.9	1 285.5	1 371.5	574.2	638.7	598.5	689.0
Net wages and salaries	860.5	880.5	927.5	410.3	450.2	417.5	463.0
Entrepreneurial and property income, gross	611.1	607.5	638.5	307.3	303.8	317.0	290.5
Entrepreneurial and property income, net	515.9	509.0	538.0	262.7	253.2	272.0	237.0
Distributed profits 3)	391.6	424.0	452.0	203.1	188.5	216.0	208.0
Undistributed profits	124.2	85.5	86.0	59.5	64.7	56.0	29.5
Net national product at factor cost	2 087.6	2 177.5	2 315.5	1 007.8	1 079.9	1 045.0	1 132.5
Depreciation	330.2	355.5	385.5	162.2	168.0	174.0	181.5
Indirect taxes less subsidies	246.1	274.0	303.5	119.4	126.7	126.5	147.5
Gross national product	2 664.0	2 807.5	3 004.5	1 289.4	1 374.6	1 346.0	1 461.5
b) % change of previous year							
Income from employment	7.0	6.5	7.0	7.6	6.6	4.0	8.5
Gross wages and salaries	7.4	6.0	6.5	7.8	7.0	4.0	8.0
Net wages and salaries	9.9	2.5	5.5	10.7	9.3	2.0	3.0
Memo item:							
Gross wages and salaries per employee	8.5	10.5	9.0	7.6	9.5	8.5	12.5
Net wages and salaries per employee	11.1	6.5	7.5	10.4	11.8	6.0	7.0
Entrepreneurial and property income, gross	4.5	-0.5	5.0	4.8	4.2	3.0	-4.5
Entrepreneurial and property income, net	6.3	-1.5	5.5	6.9	5.7	3.5	-6.5
Distributed profits 3)	3.2	8.0	6.5	7.2	-0.8	6.5	10.0
Net national product at factor cost	6.3	4.5	6.5	6.7	5.9	3.5	5.0
Depreciation	6.8	7.5	8.5	6.5	7.1	7.5	8.0
Indirect taxes less subsidies	-3.7	11.5	10.5	-3.2	-4.3	6.0	16.5
Gross national product	5.3	5.5	7.0	5.7	5.0	4.5	6.5
6. Private households' incomes and expenditure a) DM bill							
Net wages and salaries	860.5	880.5	927.5	410.3	450.2	417.5	463.0
Current transfers received 4)	422.5	462.0	501.5	203.1	219.3	224.0	238.0
Distributed profits and property income	454.9	504.0	540.5	230.4	224.6	253.0	250.5
Less:							
Interest on customer debt	28.7	33.5	36.0	13.1	15.6	16.5	17.5
Current transfers made 5)	41.8	46.5	50.5	20.8	21.0	22.5	24.0
Disposable income	1 667.4	1 766.0	1 883.5	809.9	857.5	856.0	910.5
Private consumption	1 466.8	1 564.0	1 655.5	705.2	761.5	754.5	809.5
Current savings	200.6	202.0	228.5	104.6	95.9	101.0	101.0
Current savings as % of disposable income (savings ratio)	12.0	11.5	12.0	12.9	11.2	12.0	11.0
b) % change on previous year							
Net wages and salaries	9.9	2.5	5.5	10.7	9.3	2.0	3.0
Current transfers received 4)	6.8	9.5	8.5	4.6	8.8	10.5	8.5
Distributed profits and property income	4.7	10.5	7.5	7.5	2.0	10.0	11.5
Disposable income	7.5	6.0	6.5	8.2	7.0	5.5	6.0
Private consumption	7.3	6.5	6.0	7.0	7.6	7.0	6.5
Current savings	9.2	1.0	13.0	16.6	2.1	-3.5	5.0

Appendix 1 continued
Federal Republic of Germany
Key National Accounts Data
Forecast for 1991 and 1992

	1990	1991	1992	1990		1991	
				1st half	2nd half	1st half	2nd half
7. Public-sector revenue and expenditure 6)							
a) DM bill.							
Revenue							
Taxes	612.3	688.5	746.5	284.2	328.1	309.5	379.0
Social insurance contributions	456.6	501.0	535.5	219.9	236.6	233.0	268.0
Business income	33.6	33.5	39.5	20.8	12.9	20.0	13.5
Other current transfers 3)	26.2	30.0	31.5	12.3	13.9	14.5	16.0
Incoming property transfers	7.6	7.5	8.0	3.5	4.1	3.5	4.0
Total revenue	1 136.3	1 260.5	1 360.5	540.7	595.6	580.5	680.0
Expenditure							
Government consumption	516.8	559.5	597.5	240.0	276.8	259.5	300.0
Interest	68.2	80.0	92.0	34.9	33.3	41.0	39.0
Current transfers	553.7	624.5	656.5	262.0	291.7	307.0	317.5
Private households	428.3	472.5	514.0	206.2	222.1	229.5	243.0
Companies	88.4	94.5	92.5	37.9	50.5	44.0	50.5
Abroad 3)	37.0	57.5	50.0	17.9	19.1	33.0	24.5
Outgoing property transfers	35.1	44.0	46.5	15.3	19.9	20.0	24.0
Net investment	43.5	48.5	54.5	18.2	25.3	19.0	29.5
Total expenditure	1 217.2	1 356.5	1 447.0	570.3	647.0	646.0	711.0
Financial balance	−80.9	−96.0	−86.5	−29.6	−51.4	−65.0	−30.5
b) % change on previous year							
Revenue							
Taxes	1.6	12.5	8.5	−0.1	3.1	9.0	15.5
Social insurance contributions	6.2	9.5	7.0	7.2	5.3	6.0	13.0
Business income	5.5	0.5	17.0	3.7	8.3	−3.0	5.5
Other current transfers 3)	−16.1	15.0	3.5	−12.2	−19.2	16.0	14.5
Incoming property transfers	17.0	−1.5	5.5	21.8	13.3	1.0	−3.5
Total revenue	3.1	11.0	8.0	2.7	3.5	7.5	14.0
Expenditure							
Government consumption	6.6	8.0	7.0	5.9	7.2	8.0	8.5
Interest	6.0	17.5	15.0	2.3	10.1	17.0	17.6
Current transfers	10.9	13.0	5.0	7.8	13.8	17.0	9.0
Private households	7.1	10.5	9.0	4.6	9.4	11.5	9.5
Companies	47.9	7.0	−2.5	39.3	55.1	16.5	−0.5
Abroad 3)	−6.2	55.5	−12.5	−4.4	−7.9	84.5	28.0
Outgoing property transfers	14.5	26.0	5.0	19.6	10.9	31.5	21.5
Net investment	9.3	12.0	12.0	6.2	11.6	4.0	17.5
Total expenditure	8.8	11.5	6.5	6.9	10.5	13.0	10.0

1) Gross domestic product at prices of 2nd half of 1990 per hour worked. — 2) Figures for the Federal Republic consolidated of intra-German transactions. — 3) After deducting interest on consumer and public debt. — 4) Social security benefits minus payroll tax on pensions and early retirement benefits, contributions made by the state for recipients of social benefits and their own contributions, plus company contributions for recipients of early retirement benefits and transfers to non-profit organisations. — 5) Taxes which cannot be classified, voluntary social security contributions by the self-employed, housewives etc., repayments and other current transfers to the state, net indemnity insurance premiums minus indemnity insurance payout, international private transfers. — 6) Area authorities, ERP, equalization of burdens fund and social insurance.

Sources: 1990 calculations by the Federal Statistical Office and empirically based model calculations by the DIW. 1991 and 1992 DIW estimates. Forecast figures rounded.

Appendix 2
West Germany
Key National Accounts Data
Forecast for 1991 and 1992

	1990	1991	1992	1990		1991	
				1st half	2nd half	1st half	2nd half
1. Components of GNP							
a) % change on previous year							
Employed labour force	2.8	3.0	1.5	2.5	3.1	3.5	3.0
Hours worked per working day	−1.2	−1.5	−2.0	−1.2	−1.3	−1.5	−2.0
Working days	−0.6	0.0	1.0	−0.3	−0.8	−0.5	0.5
Labour volume (by calendar month)	1.0	1.5	0.5	1.0	0.9	1.0	2.0
Productivity 1)	3.8	0.5	0.5	3.0	4.5	1.5	−1.0
Gross domestic product at constant prices	4.7	2.0	1.0	4.1	5.4	3.0	0.5
b) 1000s							
Employees	28 412	29 325	29 800	28 108	28 716	29 035	29 615
Unemployed	1 883	1 730	1 880	2 004	1 762	1 740	1 720
Unemployment ration (in %)	6.2	5.6	5.9	6.7	5.8	5.7	5.5
Short time workers	56	110	100	74	38	115	100
2. GNP by type of expenditure at current prices							
a) DM bill.							
Private consumption	1 291.3	1 372.5	1 452.0	621.5	669.8	662.5	710.0
Government consumption	447.3	489.5	498.5	207.1	240.1	217.0	252.5
Fixed capital formation	510.7	562.5	610.0	238.7	271.9	264.5	298.0
Machinery and equipment	234.5	260.0	283.0	107.2	127.4	121.5	138.5
Construction	276.1	302.5	327.5	131.6	144.6	143.0	159.5
Change in stocks	25.5	25.0	22.5	16.4	9.0	16.5	9.0
External surplus or deficit	150.8	153.0	151.5	72.4	78.4	85.0	68.0
Exports	868.3	963.5	1 024.5	413.4	454.9	482.0	482.0
Imports	717.5	810.5	872.5	341.0	376.5	397.0	414.0
Gross National Product	2 425.5	2 582.5	2 734.0	1 156.2	1 269.3	1 245.5	1 337.5
Memo item: Current balance	65.8	−16.5	−18.0	50.2	15.6	−6.0	−10.5
b) % change on previous year							
Private consumption	7.0	6.5	6.0	6.6	7.3	6.5	6.0
Government consumption	6.8	5.0	6.0	6.5	7.0	4.5	5.0
Fixed capital formation	13.0	10.0	8.5	13.3	12.6	11.0	9.5
Machinery and equipment	14.5	11.0	8.5	15.5	13.6	13.5	8.5
Construction	11.7	9.5	8.5	11.6	11.7	8.5	10.5
Exports	10.5	11.0	6.5	6.6	14.4	16.5	6.0
Imports	11.8	13.0	7.5	8.5	14.9	16.5	10.0
Gross National Product	8.0	6.5	6.0	7.1	8.9	7.5	5.5
3. GNP by type of expenditure at 1985 prices							
a) DM bill							
Private consumption	1 204.2	1 239.0	1 260.5	583.4	620.7	603.0	636.0
Government consumption	393.9	391.5	396.0	191.5	202.4	190.5	201.0
Fixed capital formation	459.1	485.5	502.5	218.4	242.7	230.5	254.5
Machinery and equipment	220.9	240.0	254.5	101.3	119.6	113.0	127.0
Construction	238.1	245.0	248.0	115.1	123.1	117.5	127.5
Change in stocks	27.4	25.5	19.0	20.0	7.4	18.5	7.0
External surplus or deficit	54.2	39.5	32.5	26.8	27.5	29.0	11.0
Exports	840.2	916.0	939.5	402.8	437.4	464.0	452.0
Imports	786.0	876.0	907.5	376.1	410.0	435.0	441.0
Gross National Product	2 138.7	2 180.5	2 210.0	1 038.1	1 100.6	1 071.0	1 109.5
Memo item: Domestic expenditure	2 084.5	2 141.0	2 178.0	1 011.3	1 073.2	1 042.5	1 098.5
b) % change on previous year							
Private consumption	4.3	3.0	2.0	4.5	4.2	3.5	2.5
Government consumption	2.9	−0.5	1.0	2.3	3.6	−0.5	−0.5
Fixed capital formation	8.8	5.5	3.5	9.3	8.3	6.5	5.0
Machinery and equipment	12.9	8.5	6.0	13.8	12.1	11.5	6.0
Construction	5.2	3.0	1.0	5.7	4.7	2.0	3.5
Exports	9.7	9.0	2.5	5.8	13.5	15.0	3.5
Imports	11.8	11.5	3.5	9.3	14.2	15.5	7.5
Gross National Product	4.5	2.0	1.5	3.8	5.2	3.0	1.0
Memo item: Domestic Expenditure	5.1	2.5	1.5	4.9	5.2	3.0	2.5

Appendix 2 continued
West Germany
Key National Accounts Data
Forecast for 1991 and 1992

	1990	1991	1992	1990		1991	
				1st half	2nd half	1st half	2nd half
4. GNP by type of expenditure: price level of national expenditure (1985 = 100) % change on previous year							
Private consumption	2.5	3.5	4.0	2.0	3.0	3.0	3.5
Government consumption	3.7	5.5	5.0	4.1	3.4	5.5	5.0
Fixed capital formation	3.8	4.0	5.0	3.6	4.0	4.0	4.5
Machinery and equipment	1.4	2.0	2.5	1.5	1.3	1.5	2.5
Construction	6.2	6.5	7.0	5.6	6.7	6.5	6.5
Exports	0.8	2.0	3.5	0.7	0.8	1.0	2.5
Imports	–0.1	1.5	4.0	–0.8	0.6	0.5	2.0
Gross National Product	3.4	4.5	4.5	3.2	3.5	4.5	4.5
5. Factor incomes in GNP a) DM bill.							
Income from employment	1 312.6	1 409.5	1 487.5	611.3	701.4	653.0	756.0
Gross wages and salaries	1 070.1	1 148.0	1 209.5	497.2	572.9	532.0	616.0
Net wages and salaries	743.8	772.5	805.0	347.7	396.1	366.5	406.0
Entrepreneurial and property income, gross	557.1	570.0	593.5	279.9	277.2	302.5	267.5
Entrepreneurial and property income, net	472.6	478.5	500.0	239.3	233.3	261.5	217.0
Distributed profits 2)	378.0	407.0	440.0	194.5	183.4	209.0	198.0
Undistributed profits	94.6	71.5	60.0	44.7	49.9	52.5	19.0
Net national product at factor cost	1 869.7	1 979.5	2 081.0	891.2	978.5	956.0	1 023.5
Depreciation	300.1	324.5	353.5	147.3	152.8	159.0	165.5
Indirect taxes less subsidies	255.7	278.5	300.0	117.7	138.0	130.5	148.0
Gross national product	2 425.5	2 582.5	2 734.0	1 156.2	1 269.3	1 245.5	1 337.5
b) % change on previous year							
Income from employment	7.5	7.5	5.5	7.2	7.7	7.0	8.0
Gross wages and salaries	7.7	7.5	5.5	7.5	8.0	7.0	7.5
Net wages and salaries	10.7	4.0	4.0	10.8	10.6	5.5	2.5
Memo item:							
Gross wages and salaries per employee	4.7	4.5	4.5	4.5	4.8	4.0	5.0
Net wages and salaries per employee	7.8	1.5	3.0	7.8	7.4	2.5	0.5
Entrepreneurial and property income, gross	8.7	2.5	4.0	7.6	9.8	8.0	–3.5
Entrepreneurial and property income, net	11.7	1.5	4.5	10.0	13.5	9.5	–7.0
Distributed profits 2)	5.6	7.5	8.0	5.9	5.2	7.5	8.0
Net national product at factor cost	7.8	6.0	5.0	7.3	8.3	7.5	4.5
Depreciation	7.4	8.0	9.0	7.1	7.7	8.0	8.5
Indirect taxes less subsidies	10.4	9.0	7.5	5.8	15.0	11.0	7.5
Gross national product	8.0	6.5	6.0	7.1	8.9	7.5	5.5
6. Private households' incomes and expenditure a) DM bill							
Net wages and salaries	743.8	772.5	805.0	347.7	396.1	366.5	406.0
Current transfers received 3)	376.8	393.5	413.5	184.8	192.0	192.0	201.5
Distributed profits and property income	432.4	473.5	511.5	218.1	214.3	239.5	234.0
Less:							
Interest on customer debt	23.6	26.0	27.5	11.3	12.3	13.0	13.5
Current transfers made 4)	39.7	43.0	47.0	19.7	20.0	21.0	22.0
Disposable income	1 489.6	1 570.5	1 655.5	719.5	770.2	764.5	806.0
Private consumption	1 291.3	1 372.5	1 452.0	621.5	669.8	662.5	710.0
Current savings	198.3	197.5	204.0	97.9	100.4	102.0	95.5
Current savings as % of disposable income (savings ratio)	13.3	12.5	12.5	13.6	13.0	13.5	12.0
b) % change on previous year							
Net wages and salaries	10.7	4.0	4.0	10.8	10.6	5.5	2.5
Current transfers received 3)	5.2	4.5	5.0	4.8	5.5	4.0	5.0
Distributed profits and property income	6.4	9.5	8.0	6.3	6.6	10.0	9.0
Disposable income	8.0	5.5	5.5	7.8	8.2	6.5	4.5
Private consumption	7.0	6.5	6.0	6.6	7.3	6.5	6.0
Current savings	15.6	–0.5	3.0	16.6	14.7	4.0	–4.5

Appendix 2 continued
West Germany
Key National Accounts Data
Forecast for 1991 and 1992

	1990	1991	1992	1990		1991	
				1st half	2nd half	1st half	2nd half
7. Public-sector revenue and expenditure 5)							
a) DM bill.							
Revenue							
Taxes	574.3	642.0	688.0	263.3	311.0	288.5	353.5
Social insurance contributions	409.4	447.0	472.0	194.0	215.4	208.5	239.0
Business income	33.4	33.5	39.0	20.7	12.8	20.0	13.5
Other current transfers	24.9	27.0	28.0	11.7	13.2	12.5	14.0
Income property transfers	7.6	7.5	8.0	3.5	4.1	3.5	4.0
Total revenue	1 049.6	1 157.0	1 235.0	493.1	556.5	533.0	624.0
Expenditure							
Government consumption	447.3	469.5	498.5	207.1	240.1	217.0	252.5
Interest	64.2	74.0	83.0	32.9	31.3	38.0	36.0
Current transfers	516.1	623.5	643.0	231.8	284.3	310.5	313.0
Private households	382.1	400.0	420.0	186.5	193.6	196.0	204.0
Companies	51.9	54.5	55.5	22.9	29.0	24.0	30.5
Abroad	82.1	169.0	167.5	20.4	61.7	90.5	78.5
Outgoing property transfers	33.5	34.0	35.0	13.6	19.9	16.0	18.5
Net investment	39.8	41.0	42.5	16.9	22.9	17.0	24.0
Total expenditure	100.8	1 242.0	1 302.0	502.3	598.5	598.5	644.0
Financial balance	–51.2	–85.0	–67.0	–9.2	–42.0	–65.5	–20.0
b) % change on previous year							
Revenue							
Taxes	2.6	12.0	7.0	–0.1	4.9	9.5	13.6
Social insurance contributions	6.8	9.0	5.5	6.9	6.7	7.5	11.0
Business income	5.4	0.0	16.5	3.7	8.4	–3.0	5.0
Other current transfers	0.4	8.0	4.5	1.2	–0.3	8.0	7.5
Incoming property transfers	17.1	–1.5	5.5	21.8	13.3	1.0	–3.5
Total revenue	4.3	10.0	6.5	2.9	5.6	8.0	12.0
Expenditure							
Government consumption	6.8	5.0	6.0	6.5	7.0	4.5	5.0
Interest	6.4	15.5	12.0	2.5	10.8	15.5	15.0
Current transfers	13.7	21.0	3.0	4.7	22.2	34.0	10.0
Private households	5.0	4.5	5.0	4.9	5.2	4.0	5.5
Companies	2.2	5.0	1.5	0.1	3.9	5.5	4.5
Abroad	108.1	106.0	–1.0	9.1	197.4	342.5	27.5
Outgoing property transfers	9.2	2.0	2.5	6.7	10.9	16.5	–6.0
Net investment	7.1	2.5	4.0	7.0	7.2	0.0	4.5
Total expenditure	10.0	13.0	5.0	5.4	14.1	19.0	7.5

1) Gross domestic product at 1985 prices per hour worked. — 2) After deducting interest on consumer and public debt. — 3) Social security benefits minus payroll tax on pensions and early retirement benefits, contributions made by the state for recipients of social benefits and their own contributions, plus compnay contributions for recipients of early retirement benefits and transfers to non-profit organisations. — 4) Taxes which cannot be classified, voluntary social security contributions by the self-employed, housewives etc., repayments and other current transfers to the state, net indemnity insurance premiums minus indemnity insurance payout, international private transfers. — 5) Area authorities, ERP, equalization of burnders fund and social insurance.

Sources: Federal Statistical Office; DIW estimates. Forecast figures rounded.

Appendix 3
East Germany
Key National Accounts Data
Forecast for 1991 and 1992

	1990	1991	1992	1990		1991	
				1st half	2nd half	1st half	2nd half
1. Components of GNP							
a) % change on previous year							
Employed labour force	-10.3	-23.5	-14.5	-5.9	-14.7	-22.5	-24.5
Hours worked per working day	-5.1	-20.0	6.5	0.0	-11.4	-23.5	-15.5
Working days	-1.3	-0.5	1.5	-0.6	-1.9	-2.0	0.5
Labour volume (by calendar month)	-15.9	-39.5	-8.0	-6.4	-25.8	-41.5	-36.0
Productivity 1)	3.0	24.0	12.0	6.1	-0.0	11.0	36.5
Gross domestic product at constant prices	-13.4	-24.5	3.0	-0.7	-25.9	-35.0	-11.0
b) 1000s							
Employees	8 847	6 780	5 800	9 345	8 349	7 250	6 305
Unemployed	228	956	1290	48	407	795	1 115
Unemployed ration (in %)	2.5	12.3	18.2	0.5	4.7	9.9	15.0
Short time workers	758	1 770	995	0	1 515	1 945	1 600
2. GNP by type of expenditure at current prices							
a) DM bill.							
Private consumption	175.5	191.5	203.5	83.7	91.7	92.0	99.5
Government consumption	89.5	90.0	99.0	32.8	36.6	42.5	47.5
Fixed capital formation	48.3	56.5	69.5	24.5	23.8	26.0	30.5
Machinery and equipment	20.0	25.5	30.0	10.3	9.8	11.5	13.5
Construction	28.3	31.0	39.5	14.2	14.1	14.0	17.0
Change in stocks	-9.8	17.0	4.5	-0.9	-8.9	8.0	9.0
External surplus or deficit	-44.9	-130.0	-106.0	-7.0	-37.9	-67.5	-63.0
Exports	60.8	55.5	67.0	28.1	32.7	27.0	29.0
Imports	105.7	186.0	173.5	35.1	70.6	94.0	91.5
Gross National Product	238.5	224.5	270.0	133.2	105.3	101.0	124.0
Memo item: Current balance	-0.1	-16.0	14.5	-4.6	4.4	-9.0	-7.0
b) % change on previous year							
Private consumption	10.0	9.0	6.5	10.2	9.8	10.0	8.5
Government consumption	5.4	29.5	10.0	2.1	8.5	29.5	29.5
Fixed capital formation	-3.5	17.0	23.0	-1.8	-5.2	5.0	29.0
Machinery and equipment	1.5	27.0	18.0	8.0	-4.8	13.0	41.5
Construction	-6.7	10.0	27.0	-7.9	-5.5	-1.0	21.0
Exports	12.9	-8.5	20.5	6.8	18.7	-4.5	-11.5
Imports	70.2	76.0	-6.5	21.0	113.4	166.0	30.0
Gross National Product	-15.9	-6.0	20.0	-5.2	-28.4	-24.5	17.5
3. GNP by type of expenditure at prices of 2nd half of 1990							
a) DM bill.							
Private consumption	174.3	171.5	186.0	82.6	91.7	85.0	86.5
Government consumption	71.4	78.5	75.5	34.7	36.6	40.5	38.0
Fixed capital formation	48.4	53.5	61.5	24.7	23.8	24.5	28.5
Machinery and equipment	20.0	24.5	28.5	10.4	9.6	11.5	13.0
Construction	28.4	28.5	33.0	14.3	14.1	13.0	15.5
Change in stocks	-5.1	16.5	2.5	3.8	-8.9	9.5	7.0
External surplus or deficit	-46.5	-129.0	-102.0	-8.6	-37.9	-67.5	-61.5
Exports	59.4	54.5	62.5	26.7	32.7	26.5	28.0
Imports	105.9	183.5	164.0	35.3	70.6	94.0	89.5
Gross National Product	242.5	190.5	203.5	137.2	105.3	92.5	98.5
Memo item: Domestic expenditure	289.0	319.5	305.5	145.8	143.2	159.5	160.0
b) % change on previous year							
Private consumption	15.1	-1.5	-3.5	14.4	15.8	3.0	-5.5
Government consumption	0.0	10.0	-3.5	-0.4	0.5	17.0	3.5
Fixed capital formation	-5.7	10.0	15.0	-3.7	-7.6	-0.5	20.5
Machinery and equipment	0.5	23.5	14.5	7.2	-5.8	10.5	37.5
Construction	-9.6	0.5	15.5	-10.4	-8.7	-8.5	9.5
Exports	19.0	-8.5	14.5	9.4	28.1	-1.0	-14.5
Imports	66.9	73.5	-10.5	18.8	109.2	166.0	27.0
Gross National Product	-12.6	-21.5	6.5	-0.4	-24.7	-33.0	-6.5
Memo item: Domestic expenditure	-0.7	10.5	-4.5	1.9	-3.2	9.5	12.0

Appendix 3 continued
East Germany
Key National Accounts Data
Forecast for 1991 and 1992

	1990	1991	1992	1990		1991	
				1st half	2nd half	1st half	2nd half
4. GNP by type of expenditure: price level of national expenditure (2nd half of 1990 = 100) % change on previous year							
Private consumption	-4.5	11.0	10.0	-3.6	-5.2	6.5	15.0
Government consumption	5.4	17.5	14.0	2.5	8.0	10.5	25.0
Fixed capital formation	2.3	6.5	7.0	2.0	2.6	5.5	7.0
Machinery and equipment	1.0	2.5	3.0	0.8	1.3	2.0	3.0
Construction	3.1	9.5	10.0	2.8	3.5	8.0	10.5
Exports	-6.1	-0.0	5.0	-2.4	-7.3	-4.0	3.5
Imports	2.0	1.5	4.0	1.8	2.0	1.0	2.0
Gross National Product	-3.8	20.0	12.5	-4.8	-2.3	12.5	26.0
5. Factor incomes in GNP a) DM bill.							
Income from employment	163.9	181.0	199.5	89.2	74.7	75.0	85.5
Gross wages and salaries	142.8	137.5	161.5	77.0	65.8	64.5	73.0
Net wages and salaries	116.7	108.5	122.5	62.6	54.1	51.0	57.0
Entrepreneurial and property income, gross	54.0	37.0	45.0	27.4	26.6	14.0	23.0
Entrepreneurial and property income, net	43.3	30.5	38.0	23.4	19.9	10.5	20.0
Distributed profits 2)	13.7	17.0	12.0	8.6	5.1	7.0	10.0
Undistributed profits	29.6	14.0	26.0	14.8	14.8	3.5	10.0
Net national product at factor cost	217.9	198.0	234.0	116.6	101.3	89.5	109.0
Depreciation	30.2	31.0	32.0	14.9	15.3	15.5	16.0
Indirect taxes less subsidies	-9.6	-4.5	3.5	1.7	-11.3	-4.0	-0.5
Gross national product	238.5	224.5	270.0	133.2	105.3	101.0	124.0
b) % change on previous year							
Income from employment	3.9	-2.0	18.0	10.1	-2.8	-15.5	14.5
Gross wages and salaries	4.9	-3.5	17.5	10.2	-0.7	-16.0	11.0
Net wages and salaries	5.3	-7.0	13.0	9.9	0.4	-18.5	5.5
Memo item:							
Gross wages and salaries per employee	18.0	25.5	38.0	17.8	18.0	8.5	46.0
Net wages and salaries per employee	18.4	21.0	33.0	17.4	19.2	6.0	39.0
Entrepreneurial and property income, gross	-25.0	-31.0	20.5	-17.0	-31.7	-48.5	-13.0
Entrepreneurial and property income, net	-30.4	-29.5	25.0	-16.9	-41.5	-54.5	0.0
Distributed profits 2)	-36.8	22.5	-28.5	46.3	-67.8	-18.5	92.0
Net national product at factor cost	5.2	-9.0	18.5	2.3	-12.5	-23.5	7.5
Depreciation	1.4	3.0	3.5	1.1	1.7	2.5	3.5
Indirect taxes less subsidies	.	.	.	.	.	.	.
Gross national product	-15.9	-6.0	20.0	-6.2	-26.4	-24.5	17.5
6. Private households' incomes and expenditure a) DM bill.							
Net wages and salaries	116.7	108.5	122.5	62.6	54.1	51.0	57.0
Current transfers received 3)	45.7	68.5	68.5	18.4	27.3	32.0	36.5
Distributed profits and property income	22.6	30.0	29.0	12.3	10.3	13.5	17.0
Less:							
Interest on customer debt	5.1	7.5	8.5	1.8	3.3	3.5	4.0
Current transfers made 4)	2.2	3.0	3.5	1.1	1.1	1.5	2.0
Disposable income	177.8	196.0	228.0	90.4	87.3	91.5	104.5
Private consumption	175.5	191.5	203.5	83.7	91.7	92.0	99.5
Current savings	2.3	4.5	24.5	6.7	-4.4	-0.5	5.0
Current savings as % of disposable income (savings ratio)	1.3	2.5	10.5	7.4	-5.0	-1.0	5.0
b) % change on previous year							
Net wages and salaries	5.3	-7.0	13.0	9.9	0.4	-18.5	5.5
Current transfers received 3)	22.1	49.5	29.0	2.9	39.7	73.0	34.0
Distributed profits and property income	-19.9	33.5	-4.5	35.2	-46.1	8.5	63.5
Disposable income	3.5	10.0	16.5	10.7	-3.0	1.0	20.0
Private consumption	10.0	9.0	6.5	10.2	9.8	10.0	8.5
Current savings	.	.	.	.	.	.	.

Appendix 3 continued
East Germany
Key National Accounts Data
Forecast for 1991 and 1992

	1990	1991	1992	1990		1991	
				1st half	2nd half	1st half	2nd half
7. Public-sector revenue and expenditure 5)							
a) DM bill.							
Revenue							
Taxes	39.0	46.5	56.5	20.9	17.1	21.0	25.5
Social insurance contributions	47.2	54.0	63.5	26.0	21.2	25.0	29.0
Business income	0.2	0.5	0.5	0.1	0.1	0.0	0.0
Other current transfers	46.5	115.0	121.0	3.2	43.4	56.0	56.0
Incoming property transfers	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total revenue	131.9	215.5	243.0	50.1	81.8	105.0	110.5
Expenditure							
Government consumption	69.5	80.0	89.0	32.8	36.6	42.5	47.5
Interest	4.0	6.0	9.0	2.0	2.0	3.0	3.0
Current transfers	82.8	112.5	131.0	32.8	80.0	53.5	59.0
Private households	46.2	72.5	94.0	17.8	28.5	33.5	38.0
Companies	36.5	40.0	37.0	15.0	21.5	20.0	20.0
Abroad	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Outgoing property transfers	1.6	10.0	11.5	1.6	0.0	4.0	8.0
Net investment	3.7	7.5	12.0	1.2	2.4	2.0	6.0
Total expenditure	161.6	226.0	262.5	70.5	91.1	105.0	121.5
Financial balance	-29.7	-10.5	-19.5	-20.4	-9.4	0.0	-11.0
b) % change on previous year							
Revenue							
Taxes	-10.9	22.0	26.0	0.2	-21.5	0.0	48.5
Social insurance contributions	1.5	14.0	18.0	9.1	-6.4	-4.5	36.5
Business income	.	.	.	.	.	.	.
Other current transfers	.	.	.	.	.	.	.
Incoming property transfers	.	.	.	.	.	.	.
Total Revenue	37.8	63.5	13.0	6.2	68.6	109.5	35.0
Expenditure							
Government consumption	5.4	29.5	10.0	2.1	8.5	29.5	29.5
Interest	0.0	50.0	50.0	0.0	0.0	40.0	50.0
Current transfers	82.6	36.0	16.5	50.8	111.9	63.5	18.0
Private households	27.1	56.5	29.5	2.0	50.2	89.0	36.5
Companies	305.6	9.5	-7.5	244.8	362.4	33.5	-7.0
Abroad	.	.	.	.	.	.	.
Outgoing property transfers	.	.	.	.	.	.	.
Net investment	39.5	109.5	55.0	-3.2	79.6	54.5	138.0
Total expenditure	37.1	40.0	16.0	23.3	50.0	48.0	33.0

1) Gross domestic product at prices of 2nd half of 1990 per hour worked. — 2) After deducting interest on consumer and public debt. — 3) Social security benefits minus payroll tax on pensions and early retirement benefits, contributions made by the state for recipients of social benefits and their own contributions, plus company contributions for recipients of early retirement benefits and transfers to non-profit organisations. — 4)Taxes which cannot be classified, voluntary social security contributions by the self-employed, housewives etc., repayments and other current transfers to the state, net indemnity insurance premiums minus indemnity insurance payout, international private transfers. — 5) Area authorities, ERP, equalization of burdens fund and social insurance.

Sources: 1990 based on calculations by the Federal Statistical Office for the 2nd half of 1990 and on model calculations by the DIW; 1991 and 1992 DIW estimates. Forecast figures rounded.