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German unification: A progress report

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German Unification:
A Progress Report

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Abstract

In the five years after unification, efforts to bring up the eastern part of Germany to the level of the western one have made considerable progress. Eastern Germany's growth is moving towards the double digits, just like growth in the Pacific Rim region. But not all things have developed as well as they might. Rapid wage convergence has caused enormous unemployment in the east and a heavy tax burden in financing massive transfer payments in the west.

The paper analyses the catching up of the eastern German economy against the background of the unpleasant trade-off between the pace of wage increase and the level of transfer payments necessary to spur investment and to finance consumption. It describes

- first, the two-pronged policy mix to reconstruct and modernize the eastern German economy on a firm level, and,
- second, typical adjustment profiles for the economy as a whole with regard to capital stock, output, and employment.

Finally, it discusses the key policy question of how the high unemployment as well as the high costs of public assistance could be reduced (P52).

I United but not yet a Unity: The Five Years after the "Big Bang"[1]

Five years ago, in the euphoria of unification, the German Chancellor Dr. Helmut Kohl promised the east Germans "blossoming landscapes" — in contrast to the dreary scenery of smoky stacks and rusty tubes inherited from the socialist regime. Since then, nearly one trillion Deutschmark (US$ 700 billion) have been pumped from west to east. Results seem to justify the efforts. East Germany's economic revival is impressive by any standards. Growth rates come close to the double digits, just like those in south-east Asia. The question whether German unification will become an economic success, can be answered clearly: yes.

Nevertheless, many Germans from east and west agree, at least, that things have not gone as well as they might. Until now the east and the west are still like unequal twins. Even healthy growth has brought output in eastern Germany just back to the pre-unification level. The economic clasm is reflected by the region's poor contribution of less than 10 percent to the all German GDP — compared to a share of 20 percent in total population. Consequently, per capita GDP accounted only for 50 percent of west Germany's equivalent. Even if high growth sustains, it will need at least ten more years to close the gap [Siebert 1995].

In early blueprints for unification the deplorable state of the eastern German economy had not been completely recognized. There was a widespread feeling that it would be possible to restructure and modernize the old socialist conglomerates and enterprises in a relatively short period of time. In this respect, eastern Germany seemed to be luckier than its eastern neighbour countries as it could

1 The paper was presented at the Pacific Rim Allied Economic Organizations Conference held in Hong Kong from 11 – 15 January 1996. I gratefully acknowledge the excellent help of Birgit Sander and Wolfgang Winkler.

count on financial and managerial resources of western Germany. However, two things thwarted such expectations: the political decision to establish the Deutschmark as currency at parity (the black market exchange rate for the average of the years 1987 to 1989 was 14:1), and dynamic wage increases brought up eastern Germany's unit labour costs to a level more than twice as high as in the west. The capital stock which had some positive value under socialism became to a great extent depreciated overnight. It has to be built up from scratch.

As a consequence, the costs accruing to western Germany for supporting the eastern German economy have been immense. The easterners' aspirations for wages, jobs and social provisions could only be fulfilled by means of massive transfer payments. Since the east produces only 60 percent of what it consumes and invests, a huge trade balance deficit has to be financed by the west. From 1990 to 1995 the deficit in the current account accumulated to about 1,250 bn DM; two thirds of it were financed by public transfer payments. Although the united Germany has absorbed such deficits (which temporarily amounted to 6 percent of its GDP) with the Deutschmark stronger than ever and interest rates lower than in most other countries, it is evident that they must be reduced considerably in the years to come.

There is a plethora of books and articles dealing with the German unification.[2] They illustrate the wide range of issues — e.g., the establishment of the German Economic, Monetary and Social Union (GEMSU), the privatization and restructuring of state-owned enterprises or the financing of unification costs and their strain on the public budgets — and the wide range of opinions about them, too.

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[2] Among English-language publications, for instance, Lipschitz and McDonald [1990], Akerlof et al. [1991], Bae [1993], Burda and Funke [1993], Dennis [1993], Ghaussy and Schäfer [1993], Schatz and Schmidt [1992], Steinherr [1994], Siebert [1990, 1994, 1995], Behrend [1995], Carlin and Richthofen [1995].

The focus of this paper is of limited scope: it studies the real adjustment process in the east German economy under the given constraint of wage convergence. It describes first, the two-pronged policy mix to reconstruct and modernize the economy on the firm level, second, typical adjustment profiles with regard to capital stock, output and employment, and third, the main distortions in the structural pattern of the economy. Finally, it discusses the key policy questions: how can high unemployment as well as large-scale public assistance be reduced.

II Wage Convergence ahead of Efficiency Convergence: The Wrong Model for Merging Two Economies

To understand the long and troublesome unification process it has to be emphasized that — compared to other economies in transition — the eastern German economy is a special case. The task has not only been to transform the economy from a centrally planned system into a market system but also to integrate it into the western German one. Both economies have been rather different with respect to their level of development, factor endowment, sectoral structure and international competitiveness. What could be expected to happen if two such different economies are merged? If the standard model of integration is applied, one would conclude the following [Siebert 1990, Schmidt and Naujoks 1995]:

First: Both economies will extend and diversify bilateral trade according to their factor endowment, specialization and productivity differentials. In the short term the superior economy will display its comparative advantages in tradables and will gain a huge export surplus. The inferior economy will suffer from an import deficit which must be financed by foreign capital or transfers from abroad.

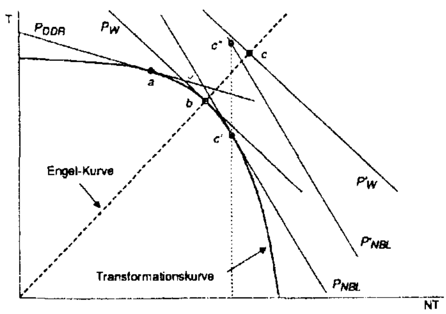
Second: Both economies will export their excess of mobile resources: the superior economy will export capital and technology while in the inferior economy will export labour and land. In the short run the transfer of mobile resources will avoid bottlenecks in the factor markets, in the long run it serves to equate differences in productivity, real wages and profits.

Third: Both economies will adjust production structures according to their long run comparative advantages. The size of required structural adjustment depends on the extent of distortions. It is much higher in the inferior economy than in the superior one. In the short-run scenario the inferior economy will undergo a process of de-industrialization, although in the long run a re-industrialization is likely to occur. In the case that production structures are identical (albeit of different efficiency levels) an intra-industry specialization will emerge leading to more or less substitutive structures in the two economies.

There is always some evidence that the collapse of the eastern German economy after the unification shock is in full congruence with the standard Heckscher-Ohlin model which is based on factor endowment, factor prices and factor movements. It predicts that things must become worse before they can get better. However, the crucial point is that the model is based on the assumption that factor prices are determined by relative scarcity. In this model it is assumed that huge wage differences exist reflecting the backwardness of the inferior economy and, hence, the gap in productivity. All that is far from the German reality. From the start, the basic problem has been the large jump in real wages which — in combination with the appreciation of the real exchange rate — pushed up unit labour costs. In the meantime, the wage differentials — at the outset on average 1:3 for east versus west — have been equalized to a great extent. As a result, German unification has thus far featured a combination of high unemployment in the east and high fiscal burden due to massive transfer payments in the west.

What has really happened in eastern Germany can be described best by a simple model developed by Naujoks [1993], Klodt, Stehn et al. [1994] and Greiner et al. [1994] (Figure 1). This model allows to distinguish between the demand effects that have risen in the short run and the supply effects from factor movements that might take longer to materialize. In characterizing the situation before unification it is assumed that the GDR economy produced two goods: tradables T and non-tradables NT. Given the structure of relative prices P_{DDR} the allocation was determined by a. Opening up the economy shifted P_{DDR} to P_W and a to b. The reason is that producers of tradables which were exposed to external competition have not been able to pass on the cost of wage increases to their customers. Producers of non-tradables were shielded from competition and have been able to increase prices with less difficulty.

Figure 1 – Relative Price Changes and Structural Change in a Two Sector Model of the Eastern German Economy



Source: Klodt, Stehn et al. [1994].

Without transfers from the west consumption possibilities of easterners would have been limited by the output *b*. With transfers they are able to consume more than they produce. This is illustrated by a move of the budget line from P_W to P'_W and of the consumption point from *b* to *c*. Since the prices for tradables are given by the world market, this leads once again to a change of relative prices from P'_W to P'_{NBL}. By that the allocation between *T* and *NT* is shifted once again from *b* to c'.

It is important to understand that the shift from tradables to non-tradables is, in terms of output and employment, by far no zero-sum game for the eastern German economy. In the short run, it is even a negative-sum game. Usually, the share of tradables in total absorption is much higher than the share of non-tradables. As a result, transfers have mainly been used to purchase tradables from abroad rather than stimulate the output in the non-tradable sector. Thus, they have increased the deficit of the external account. At last they destroyed the little value which so far has been existing in eastern German factories.

The high transfers are also an obstacle to restructuring the tradable sector of the eastern German economy and, hence, to reducing the trade deficit. Given high labour costs in the east, investors have, if at all, more incentives to commit to the non-tradable sector rather than to the tradable sector. In other words: transfers have caused immense allocative distortions which can be labelled as a Dutch disease phenomenon [Greiner et al. 1994, Siebert 1995].

III Privatization and Subsidization: Two-Pronged Policy to Restructure the Economy

The basic philosophy of German economic unification, which combined ideal and wrong conditions has been that money can buy anything, even time. For political and economic reasons there has not been the time for adopting a gradualistic strategy. Thus politicians opted for applying the Big Bang approach. From the beginning, the aspirations of east Germans have been high: they expected to reach the standard of living of the west Germans nearly overnight. The mass demonstrations in the GDR, chanting "either the Deutschmark will come to us or we will go to the Deutschmark", swept away all scruples held by politicians and economists alike. With an open border this strategy became an imperative to stem the flow of westbound eastern emigrants.

Table 1 – Output, Absorption and Transfer of Resources in Eastern Germany 1990–1994 (Billion DM)

	1990	1991	1992	1993	1994
	In current prices				
Gross domestic product	223.9	206.0	262.6	303.0	334.8
Internal absorption	277.5	358.3	457.4	512.1	562.4
Private and government consumption	223.8	267.3	328.4	357.8	381.3
Gross investments	53.7	91.0	128.9	154.3	181.1
External balance	-53.6	-152.3	-194.8	-206.7	-221.8
Exports	61.1	46.9	52.1	54.9	67.6
Imports	114.7	199.2	246.8	261.6	289.4
Transfer of Resources	53.6	152.3	194.8	206.7	221.8
Income account	1.3	8.0	10.8	9.4	8.3
Transfer account	43.6	114.6	131.9	134.6	124.5
Capital account	8.7	29.7	52.1	62.7	89.1
	In prices of 1991				
Gross domestic product	254.4	206.0	222.1	235.0	256.7
Internal absorption	308.9	358.3	412.0	434.2	467.6
Private and government consumption	261.1	267.3	290.6	295.8	305.7
Gross investments	47.8	91.0	121.4	139.4	161.9
External balance	-54.5	-152.3	-189.9	-199.2	-210.8
Exports	56.4	46.9	51.7	54.6	66.9
Imports	110.9	199.2	241.6	253.8	277.7

Source: Federal Statistical Office.

However, buying time has had a high price for the united Germany. With gross transfers of about 200 bn DM per year, it has shouldered a heavy burden (Table 1). Since 1991 a wide range of government support schemes have been established in order to give investment incentives or subsidies to prevent firms from collapse, to improve the infrastructure and, last but not least, to finance job creation programs and social transfers. The weak point is that two thirds of the money are devoted to social consumption and only one third to rebuilding the capital stock. The reduction of western Germany's current account surplus from 107 bn DM in 1989 to a deficit of 34 bn DM indicates that even for a rich brother it is not easy to grant support on such a large scale.

Policy for German unification, although initially putting much of its trust in the power of the market has been designed with two spearheads: rapid privatization of state-owned enterprises and heavy subsidization of investment in the capital stock.

- The motivation for rapid privatization had been the need for rapid restructuring and modernization of state-owned companies. It had been recognized that a government or a government trust agency would not be able to restructure a whole economy. Restructuring should start in earnest only after privatization. Privatization could provide best of all what had been most urgently needed to create viable firms: entrepreneurial concepts, investment capital and management skills.

- The motivation for heavy subsidization had been to give incentives for investors. Early calculations had shown that eastern Germany would need about two trillion DM accumulated investment in the years to come to bring up the living standard in the east to that in the west. Without massive incentives it would not have been possible to raise such an enormous amount of money in such a short span of time.

It is important to understand privatization and subsidization as a package. Privatization of the "people's property" in eastern Germany did cost an enormous amount of money. This has not only been due to the poor state of the old socialist companies which frequently only had a negative value. Privatization has been an instrument of structural and social policy as well. By privatization many thousands of companies obtained capital for new investments which were necessary for initiating a promising entrepreneurial start. Even dyed-in-the-wool free marketeers would agree that without massive government support the process of unification could have easily ended in a fiasco. Then costs would have been insupportable in the end.

1 Privatization

Privatization had been considered as "the heart of the transformation process" [Siebert 1990]. The way unification was being carried out forced policy makers to go ahead with privatization rapidly and resolutely. This goal did not remain unchallenged. It was argued that rapid and resolute privatization would lead not only to low selling prices for assets but also to mass unemployment as private owners would radically reduce overstaffing [Sinn and Sinn 1991]. However, most of the state-owned companies were virtually bankrupt. Thus, a slower pace of and less resolute privatization presumably would have neither stabilized nor even raised the price of assets nor mitigated the contraction in employment.

The basic philosophy of the Treuhandanstalt (THA), a government trusteeship put in charge of the firms to be transferred into private property[3], was: "restructuring by privatization", which meant "privatization prior to restructuring". The THA ar-

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[3] The THA temporarily became the owner of 8,000 companies with more than 45,000 operational sites, 23,000 shops, hotels, restaurants and cinemas, numerous buildings and real estates which had once belonged to the political parties, mass organizations and public administration, 15,000 square miles of agricultural and forestry land — with the task of restructuring and privatizing them.

gued, in accordance with the overwhelming majority of economists, that a government agency would have been overcommitted to restructure many thousands of ailing companies under time constraint. Meanwhile, the THA has nearly completed its work. It finished its "operational business" at the end of 1994 after privatizing about 75 percent of former state businesses (Table 2). This is a very respectable achievement which hardly anyone would have believed possible in the beginning. However, the number of privatizations is no indicator of whether the THA worked efficiently — and in accordance with the aims it was required to assume. The results achieved also depend on the quality of its decisions. For every privatization decision there was always at least one alternative: the THA could have sold the company to another bidder, could have continued running it a while longer or could have liquidated it straight away. Its performance can thus only be evaluated on the basis of a comprehensive analysis which covers all facets of the privatization process: the aims, the options, the decision-taking process, and only then, the results achieved.

The thrilling story of privatization cannot be told at length here.[4] Nevertheless, some fundamental issues of the THA strategy shall be discussed in a critical manner. From the business economist's point of view the task of privatization is a decision-taking problem. Economic decision theory provides clear criteria to show the actions to be taken in the sale of a company. Usually, the seller has only a one-dimensional target: to maximize the asset price. However, the THA also had a highly political task. The Preamble of the THA Law required the THA "not only to reduce the area of state activity as quickly and as widely as possible by means of privatization", but also "to render as many companies as possible competitive".

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[4] The interested reader will find some publications in English, too [Dodds and Wächter 1993; Hax 1992; Schmidt 1995; Fischer, Hax and Schneider 1996].

In all this, the THA was supposed to proceed as quickly as possible, acquire investment, preserve and create jobs, and — inter alia — realize suitable proceeds from the sale. It thus had a very complex bundle of tasks, which frequently caused serious problems: the aims have been very vague, and partly contradicted one another. As legal rules had not fixed any hierarchical relationship between the aims, the THA was in principle free in deciding which companies or other assets it wished to sell and when, how and to whom.

Table 2 – State of Privatization in Eastern Germany (31/12/1994)

	Numbers	Percentage
Small privatization[a]		
Total objects	23,422	100
of which		
Privatized	15,520	65.1
Liquidated or not privatized	8,172	34.9
Large privatization		
Total companies	13,815	100
of which		
Completely privatized	6,321	45.8
Partly privatized	225	1.6
Reprivatized	1,588	11.5
Given to municipalities	265	1.9
Liquidated	157	1.1
Others	1,506	10.9
Remaining companies	3,753	27.1
of which		
Offer for sale	192	1.4
In liquidation	3,561	23.6

[a]Shops, restaurants, hotels, pharmacies, etc. finished: 30/6/1991.

Source: Treuhandanstalt.

However, the THA adopted a basic rule for privatization: to preserve a company as far as possible. Therefore it required potential investors to demonstrate convincingly their ability to continue operating the company with a good hope of success. This greatly restricted the range of possibilities for privatization. Generally speaking a potential investor was not considered eligible if he intended to turn the company to some other use or re-sell it. The THA assumed that such an investor intended to carry out his project somewhere else if he did not get his turn in privatization. Without doubt it is hardly possible to justify this focus on preserving companies and production locations on any economic grounds. The THA itself conceded that possibly such an investor was turned down although offering a better strategy.

It might be put this way too: the THA was pursuing a privatization strategy which consisted not only of a complex goal but also of the route leading to it. In the words of its lady President, its strategy was not selling but purchasing. "We give preference to a buyer if he is contributing sales channels, if he can close the innovation and technology gap ... as quickly as possible and thus enable the company to survive" [Breuel 1992]. The THA thus attempted to prevent asset-stripping, which could have resulted in serious regional employment problems, and was therefore prepared to make concessions against its final aims if it could thereby more readily attain its intermediate aims.

It is self-evident that a privatization agency which tends to purchase investors must be endowed with well filled pockets. The THA was able to serve up a palatable lunch without immediately presenting the bill which later was sent to the taxpayer.

The crucial question is now, how successful the THA has been under those conditions in terms of quality. The THA has contracted about 70,000 investors who promised about 1.5 mill. jobs and 187 bn DM investments. Two thirds of the commitments were fixed by a contract and one half was safeguarded by penalties (Table 3). The THA argues that — on average — the employment and investment targets were surpassed: until the end of 1993, e.g., about 9,200 of 10,600 contracts with employment guarantees had been examined. 600,000 jobs were maintained or created instead of 520,000 guaranteed. However, nearly 1,400 investors failed their employment targets significantly (Table 4).

Table 3 – Employment and Investment Guarantees in THA Contracts 1990–1994 (Cumulated Total)

	1990	1991	1992	1993	1994
	Employment commitments (number)				
Guaranteed by contract	25,565	411,989	778,468	919,236	974,389
Safeguarded by penalties	8,203	258,700	580,368	708,560	760,862
	Investment commitments (mill. DM)				
Guaranteed by contract	11,725	41,450	88,043	106,399	142,463
Safeguarded by penalties	175	13,494	54,828	71,433	107,117

Source: Treuhandanstalt.

Table 4 – Employment Guarantees under Examination 1990–1993 (Cumulated Total)

	1990	1991	1992	1993
	Number of examined contracts			
Total	38	2,786	7,311	9,205
	Number of guaranteed jobs			
Total				
Target	5,217	202,625	438,816	520,215
Realization	5,360	237,018	515,110	596,022
Difference	+114	+34,393	+76,294	+75,807
Of which companies				
Target realized				
Target	3,613	161,356	356,965	384,856
Realization	3,975	207,886	460,425	507,692
Difference	+362	+46,530	+103,460	+122,836
Target failed				
Target	1,604	41,269	81,851	135,359
Realization	1,385	29,132	54,685	88,330
Difference	-219	-12,137	-27,166	-47,029

Source: Treuhandanstalt.

It is, of course, much too simple to measure privatization performance by comparing targets and realization only. As has been mentioned earlier, the THA had been endowed with "deep pockets". It had been able to grant price concessions for investment and employment guarantees. In this respect it had not been too risky for investors to commit themselves because they had been compensated for in advance.

Whatever the judgement may be: the costs of privatization were enormous. Privatization of a whole economy will make a profit of roughly 70 bn DM only, but this figure has to be set against the expenditures incurred in the course of privatization and which will total about 340 bn DM. At the end, a net loss of 270 bn DM will be transferred to the state budget (Table 5). Can these high costs be justified by the benefits attained?

Table 5 – Budget of the THA 1990–1994 (bill. DM)

	1990[a]	1991	1992	1993	1994
Expenditures	5.9	27.6	41.2	46.6	49.8
of which					
Core business	1.5	16.8	27.0	34.1	46.4
Restructuring	1.3	13.2	10.9	.	.
Privatization	0.1	1.1	4.6	.	.
Closure	0.0	1.0	7.5	.	.
Others	4.4	10.8	14.2	12.5	9.4
Interests	4.3	10.4	13.3	9.9	9.0
Revenues	1.6	7.7	11.6	8.5	12.3
of which					
Privatization	1.5	7.4	9.5	4.0	5.9
Deficit	-4.3	-19.9	-29.6	-38.1	-37.5
Debt[b]	14.1	39.4	106.8	168.3	204.6

[a]2nd half-year. – [b]Inclusive historic debt; end of the year.

Source: Deutsche Bundesbank.

The deficit is principally attributable to the mismanagement of the old system, which drained companies of their financial lifeblood rather than to blame the THA. However, the question has to be asked if the deficit might not have been smaller if the THA had pursued privatization exclusively and did not have to make structural and social policy as well.

2 *Subsidization*

While privatization was given high priority as a vehicle for restructuring the eastern German economy from the early beginning, the demand for financial assistance was heavily underestimated then. One has to remember Chancellor Dr. Kohl's promise that unification could be financed without tax increase by the additional economic growth following unification. Many economists and policy makers expected a new "economic miracle" by comparing the situation in eastern Germany in 1990 with that of western Germany in 1948 after the currency reform. However, this was a fatal miscalculation. Private investors were not hurrying to invest their money in eastern Germany, except in those industries which promised quick profits such as retail and real estate. As a rule, they had to take into account the poor state of traffic and communications infrastructure, the difficulties in clearing up the restitution claims and, last but not least, the bottlenecks in the administration machinery. For these reasons, potential locational advantages of eastern Germany had not come to bear immediately. Consequently, a range of various instruments had to be utilized to promote companies which had to battle against huge obstacles in the first years after unification. Without massive incentives the process of investment would hardly have started quickly.

In 1991–1994, the total amount of public money poured into eastern Germany was 773 bn DM, of which 210 bn DM in 1994 (Table 6). Certainly, in absolute terms transfers have obviously reached the peak, and in terms of eastern German GDP they are clearly declining. Nevertheless, the eastern economy remains highly dependent on external support. There is a great risk that all the money may delay or even fail to produce convergence. The German Council of Economic Experts, the Deutsche Bundesbank and the leading research institutes are warning the government about subsidies getting out of hand. They ask for gradually running down support programs before they become a parameter in the companies' strategy: "The east German economy today faces the problem of becoming less dependent on external support and finding its way back to normality. Normality means that companies can survive without subsidies on the markets, and thereby earn the means to pay the salaries of their employees ... Despite the fact that east Germany is still a long way from this kind of normality, the main features for achieving the final objective must already be put into place today" [German Council of Economic Experts 1994].

Table 6 – Government's Support[a] to Eastern Germany by Purposes 1991–1994

	1991	1992	1993	1994	1991–1994
			Billion DM		
Enterprises	37.1	46.2	57.3	64.2	204.8
of which:					
Treuhandanstalt	23.9	27.5	33.5	30.6	115.5
Infrastructure	21.2	21.8	20.9	18.2	82.1
Labour market	38.7	45.2	50.0	42.0	175.9
Social security	16.8	24.0	26.8	33.1	100.7
Others	51.9	50.4	54.7	52.5	209.5
Total	165.8	188.0	209.7	210.0	773.0
			Percentage		
Transfers					
for consumptive purposes	65	64	63	61	63
for investive purposes	35	36	37	39	37
Share of transfers					
in overall German GDP	5.8	6.1	6.6	6.3	6.2
in eastern German GDP	80.4	71.9	69.0	62.7	69.9

[a]Gross flows.

Source: Federal Ministry of Finance; Deutsche Bundesbank.

Although it is impossible to calculate transfer payments exactly according to their purpose, one can estimate that roughly two thirds have been allocated to consumptive purposes. The dramatic decline in employment in the first phase of the transformation process had made it indispensable to soften social consequences by massive intervention in the labour market such as job creation and early retirement programs. Transfers for financing labour market and social security measures amounted to 277 bn DM in 1991–1994. Additional 116 bn DM were spent by the Treuhandanstalt. They include to a great extent hidden wage cost subsidies.

Transfers for financing public and subsidizing private investments amounted to 286 bn DM which were about 50 percent of total investment. Calculations show that private investments were subsidized by about one third on average. Clearly, this has not only boosted investment volumes in general but also generated heavy distortions with respect to investment structure. Comparing capital stock in eastern and western Germany leads to the conclusion that there is a major problem with the quality of the new capital stock built up in the east as it will become more capital-intensive than in the west (Table 7). This does not mean that investments should be of labour-intensive type — which could hardly be competitive in a high-wage country. But too heavy a commitment to capital-intensive production equally misses optimal investment allocation.

Table 7 – Capital Investments in Eastern Germany 1991–1994 and Capital Stock in Western Germany 1992
– Structure in Percent –

	Capital investments eastern Germany[a]	Capital stock western Germany[a]
Highly capital-intensive industries	59.2	40.5
of which		
Oil refineries	8.8	1.5
Stone, sand and clay industries	10.4	3.7
Food and beverages	17.9	10.1
Medium capital-intensive industries	17.0	27.7
of which		
Road vehicle construction	5.3	12.9
Low capital-intensive industries	23.9	31.7
of which		
Electrical engineering	6.4	10.0

[a]Manufacturing.

Source: Deutsches Institut für Wirtschaftsforschung.

IV Capital against Labour: Different Adjustment Paths of Accumulation, Production and Employment

As Siebert [1995] emphasized, economic development in eastern Germany is characterized by different time paths which mirror the difficult task of rebuilding the economy from scratch under the conditions of rapid wage convergence. We find a J-curve of adjustment in capital stock, a U-curve of adjustment in production and an L-curve of adjustment in employment. This is fully in line with theoretical considerations: renewing the capital stock must play the decisive role in the adjustment process — as a precondition to a gradual expansion of production and, with some delay, a stabilization of employment.

1 The J-Curve of Capital Accumulation

Calculations of eastern Germany's capital stock are difficult mainly due to the problem of valuing investments done before unification and of scrappings made thereafter. A large part of the existing capital stock was depreciated by the modus of unification. Rough calculations show that the lion's share of write-downs had to be taken into account immediately,[5] while the rest has to be distributed over a number of years. Considering the period 1991–1994, a large amount of the old capital stock in the enterprise sector became obsolete in 1992 when unit labour costs reached their peak (Figure 2).

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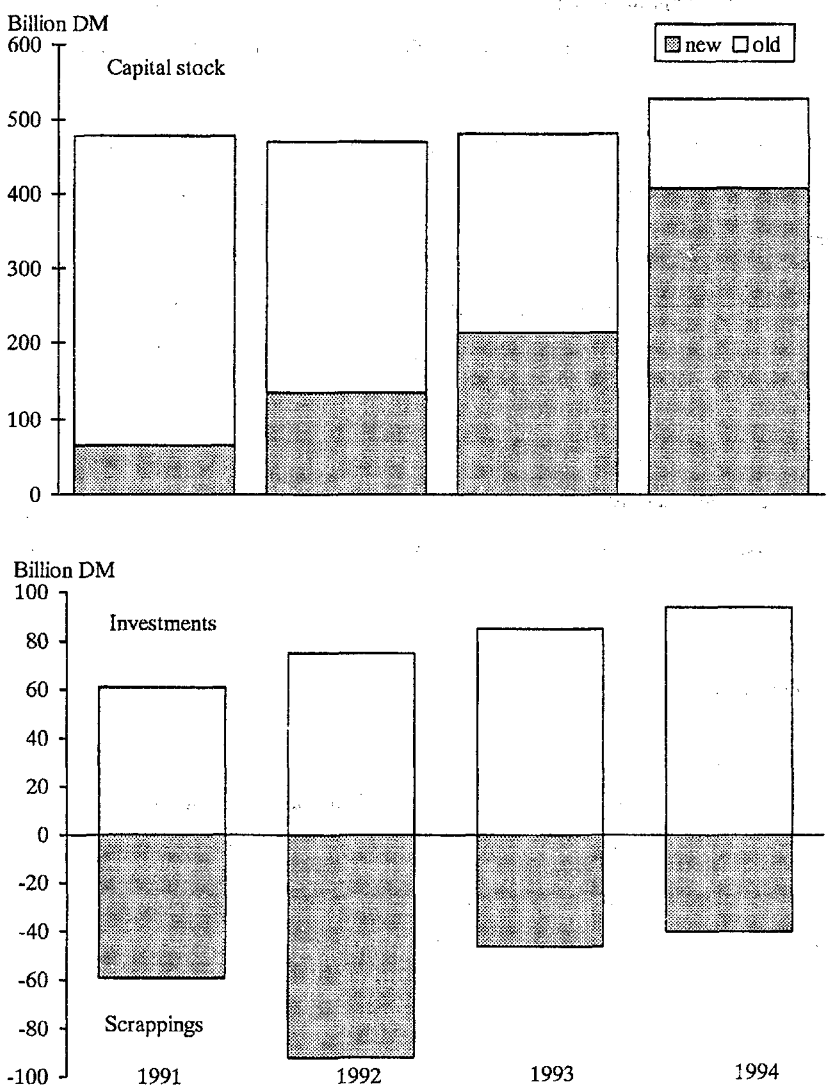
[5] Approximately one third of the existing capital of 1.2 bn DM was depreciated in summer 1990 when the German Economic, Monetary and Social Union was established.

Figure 2 – Time Path of Capital Stock Adjustment in Eastern Germany 1991–1994[a]



[a]Enterprise sector without housing; yearly averages in 1991 prices.

Source: Deutsches Institut für Wirtschaftsforschung.

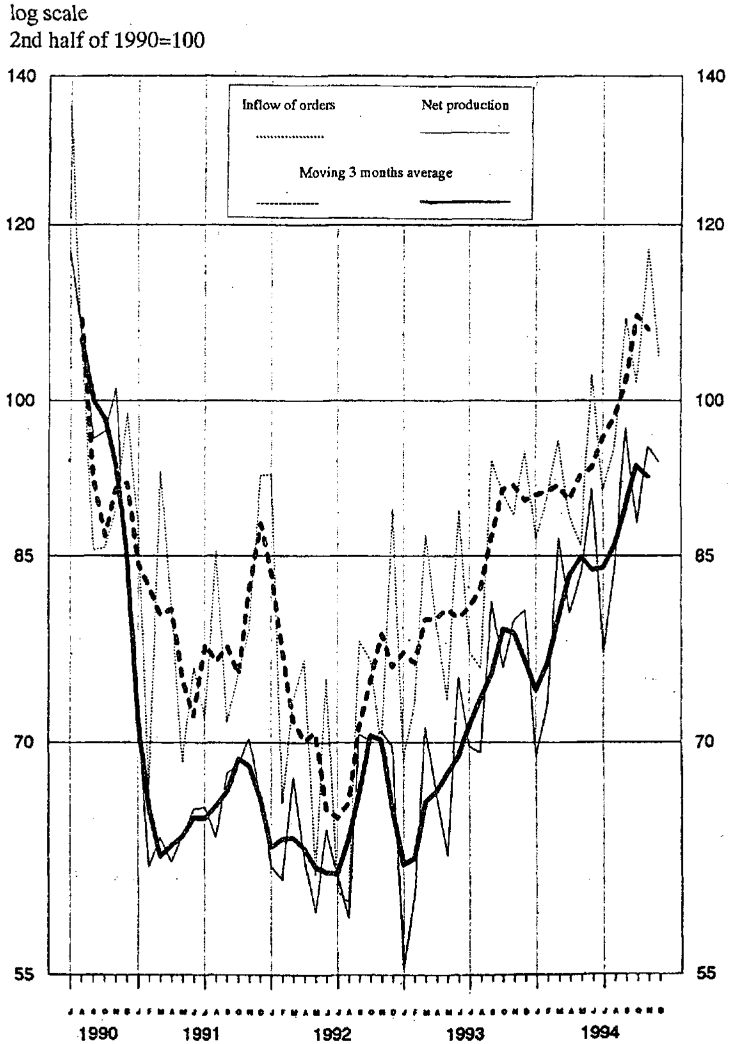
While in the period 1990–1992 scrapping of capital goods exceeded accruals, since 1993 accruals have been greater than scrappings. In 1994 the capital stock increased with a double digit rate. Meanwhile, about 80 percent of the total capital stock in the enterprise sector in eastern Germany has been renewed completely. Nevertheless, it accounts for only one tenth of the overall German capital stock whereas it should account for one fifth according to eastern Germany's share in population.

It is evident that the time eastern Germany needs to catch up depends on the future growth of the capital stock — or, more precisely, on the difference in future growth rates of the capital stock in eastern and western Germany. Assuming that the eastern German per capita capital stock has presently reached 50 percent of the western German stock, a growth differential of 6–7 percent would be necessary to close the gap completely within a decade. This is a very ambitious, though not unattainable target.

2 *The U-Curve of Production*

Rebuilding the capital stock is a precondition for the revival of output. However, the time path of output is different from that of capital stock mainly for two reasons: first, it needs some time until an investment is completed, and second, it needs some more time until new capacities can be employed fully, as it is always difficult for newcomers to establish themselves in the market.

Figure 3 – Time Path of Production Adjustment in Eastern German Manufacturing 1990–1994



Source: Federal Statistical Office.

Output in eastern German manufacturing[6] has described a U-shaped curve: after a sharp decline in the second half of 1990 output was (apart from seasonal fluctuations) stagnant in 1991 and 1992, and has been moderately but steadily increasing from the start of 1993 (Figure 3). Nevertheless, at the end of 1994 the index of net production has passed the pre-unification level. In general terms manufacturing is still the Achilles heel of the eastern German economy. There remains a significant number of companies in which order book entries and the level of capacity utilization are rather unsatisfactory.

In spite of restructuring and modernization, many companies suffer from a serious lack of profitability, as they must pay wages that exceed productivity. If permanent subsidization should be avoided, more and more companies must now start to work profitable under their own steam. This can only occur if investment activity remains on a high level and, hence, the rate of productivity growth substantially exceeds that of wage increases.

3 *The L-Curve of Employment*

Because of the large gap between labour costs and labour productivity (Figure 4) the adjustment profile of employment is very similar to an L-curve rather than a U-curve corresponding to the output profile. Employment, including persons in labour market schemes, reached the bottom in 1992, but has not clearly passed the turning point until now. Total employment dropped from nearly 10 million at the beginning of 1990 to 6.4 million persons at the end of 1992, and to 6.3 million persons at the end of 1994 (Figure 5).

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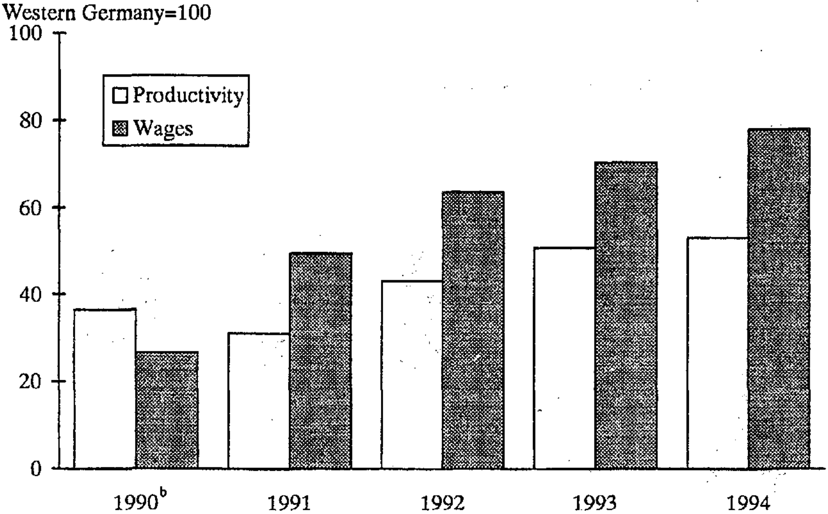
[6] In manufacturing the adjustment of production depends much more on the adjustment of the capital stock than in other industries, especially in services. In terms of GDP, the adjustment profile of output is more like a J-curve rather than a U-curve as output in services has started to increase immediately.

Figure 4 – Eastern Germany's Productivity and Wage Ratios[a] 1990–1994

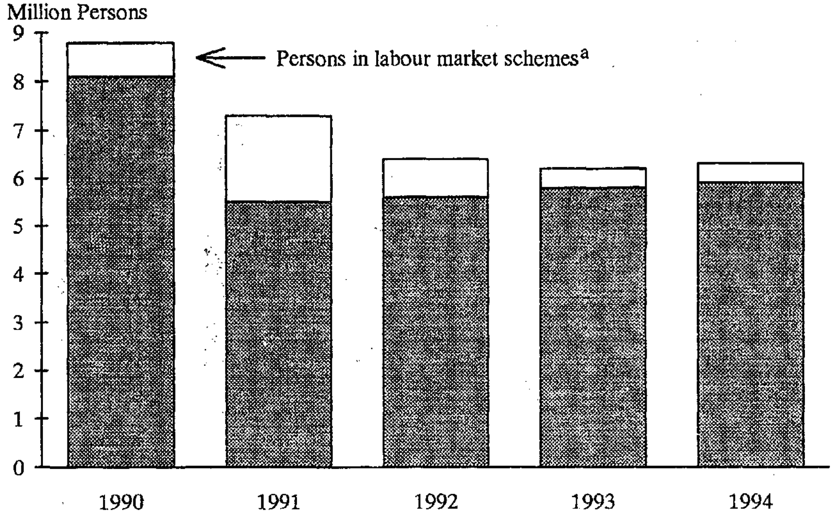


[a]Wages per employee, productivity per employed person. – [b]2nd half-year.

Source: Federal Statistical Office.

The labour market situation is, in fact, the key challenge for policy makers. It is a pretty cold comfort that the fall in employment has come to a halt and that the number of registered and concealed unemployees fell from about 2.7 million in 1993 to about 2.4 million in 1994. It is not easy to imagine in which areas a sufficient number of jobs could be created — according to its size of population eastern Germany should have at least 7.5 million jobs. With unit labour costs of about 80 percent of western German standards an expansion of labour-intensive production cannot be expected. Quite the reverse is true. Newly established working places are mainly in capital-intensive production. As far as they are exposed to international competition they can only succeed through permanent labour-saving investment rather than through labour-creating investment.

Figure 5 – Time Path of Employment Adjustment in Eastern Germany 1990–1994



[a]Job creation programs and short-time work.

Source: Federal Labour Market Office.

V Non-Tradables Beat Tradables: A Case of Dutch Disease

During the last five years eastern German economy has experienced not only a sharp contraction of output — followed by a moderate expansion — but has also had to undergo considerable structural changes. Closer examination reveals a clear-cut pattern: industries which sell their products mainly in local or regional markets have increased their share in total output, while industries producing for nation-wide or world-wide markets have lost in importance. The massive transfer payment has caused a Dutch-disease phenomenon.

The non-tradable sector, not the tradable sector, has attracted most of the capital and qualified labour. For instance, in eastern Germany the share of construction (and also of construction related industries) is twice as high as in western Germany (Table 8). The share of manufacturing, however, is only half as high. In a way, eastern Germany experienced a dramatic de-industrialization — and is still waiting for a new re-industrialization.

Table 8 – Gross Value Added and Employment in Eastern Germany by Sectors 1990–1994 (Shares in Percent)

	1990						Note: Western Germany	
	1st hy	2nd hy	1991	1992	1993	1994	1965	1994
	Gross value added[a]							
Agriculture, forestry, fishing	7.1	3.4	3.4	2.7	2.2	1.9	4.4	1.0
Manufacturing	.	.	17.0	14.6	13.8	12.6	40.2	26.8
Construction	.	.	11.8	14.6	16.1	18.6	8.0	6.6
Trade and transport	13.2	18.0	14.4	12.9	12.8	12.5	17.9	14.4
Services	8.6	17.0	22.0	25.5	27.8	27.7	15.2	36.1
State	18.0	20.3	23.6	24.3	22.5	20.9	9.6	13.2
	Employed persons							
Agriculture, forestry, fishing	.	8.9	6.2	4.5	3.9	3.6	10.7	2.9
Manufacturing	.	38.8	28.0	20.6	18.1	16.6	37.6	27.8
Construction	.	7.1	9.6	12.4	14.5	16.0	9.2	7.0
Trade and transport	.	15.9	17.0	17.9	18.0	17.8	17.9	19.3
Services	.	7.8	12.7	15.9	17.6	18.7	9.9	21.4
State	.	22.8	23.3	25.9	25.6	25.3	12.4	20.0

[a]In current prices (1st half of 1990 in GDR-Mark).

Source: Federal Statistical Office.

The orientation of the eastern German industry towards local and regional markets is concomitant with the fact that turnover on domestic markets has increased sharply, whereas it has declined on foreign markets. In 1994, foreign sales as a proportion of total sales reached only around 12 percent; while the western German industry, with a proportion of 37 percent, exported twice as much. A rough calculation shows that 57 percent of total sales by eastern German companies have been non-tradables.[7] For comparison: for western German companies this share has usually been much lower, e.g. 37 percent in 1994. These figures indicate that a competitive export base has not yet been established. The companies have lost most of their traditional export markets in the former socialist economies, but until now they have not found access to those of western market economies. The re-integration of a former socialist economy into the world economy needs some time which cannot be bought with money.

Table 9 – Sales Structure[a] of Eastern and Western German Manufacturing 1990–1994 (Shares in Percent)

	1990	1992	1994
Tradables			
Eastern Germany	64.6	42.8	43.4
Western Germany	66.0	64.0	63.1
Non-tradables			
Eastern Germany	35.4	57.2	56.6
Western Germany	34.0	36.0	37.0

[a]Classification according to Klodt, Stehn et al. [1994].

Source: Federal Statistical Office.

VI Capital or Wage Subsidies: The Key Policy Question

While in the sense of a causal therapy subsidies have been widely accepted as a policy instrument in eastern Germany, the question as to what kind of subsidies should be preferred has remained controversial. For Hallet, Ma and Mélitz [1994], e.g., the key policy question is: how can the balance be shifted in a politically acceptable way from wage convergence to employment convergence. "The question ... is not whether western support continues but whether it does so in a

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[7] The classification of branches as tradables and non-tradables in terms of their trade intensity is based on west German trade statistics for the years 1980–1990.

way which both shows wage convergence and, by reducing marginal costs of labour, increases the efficient level of eastern employment". Like many other Anglo-Saxon economists, they have pronounced themselves in favour of wage subsidies rather than capital subsidies [Akerlof et al. 1991; Begg and Portes 1992; Wolf 1992]. Interestingly enough, the overwhelming majority of German economists and politicians have always argued that wage subsidies could not be the right answer. In their opinion the most striking objection is that with regard to unemployment wage subsidies can only be used to palliate the symptoms rather than to cure the causes. However, the front line against this instrument seems to be weakening as the political establishment falls increasingly under pressure to establish what is called an active labour market policy.

To put the matter in a nutshell, there are three major deficiencies of wage subsidies as an instrument for supporting the adjustment process [Schmidt and Naujoks 1995]. Wage subsidies

- discriminate against viable and competitive enterprises;
- distort incentives for adjustment, thus causing inefficient structures of production;
- tend to degenerate into a self-perpetuating mechanism that leads to permanent intervention in the labour market [Schmidt and Sander 1993].

The policy for German economic unification is defined in terms of the long run economic performance, and that certainly is the right way. Then the relevant question to be asked is: how can the profitability of investment best be raised in eastern Germany? From a theoretical point of view the answer is clear: in the long run capital subsidies are superior to wage subsidies. They will massively direct capital from the west to the east — and that is the only way to catch up quickly.

A reduction in labour costs, however, will hamper the renewal of the capital stock, especially if the subsidies are intended to be granted only temporarily.

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