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Restructuring and competitiveness in the transition process: Evidence from an Eastern German firm panel

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Kiel Working Papers

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**Restructuring and Competitiveness
in the Transition Process:
Evidence from an Eastern German Firm Panel**

by
Katja Gerling and Klaus-Dieter Schmidt
January 1997



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Abstract

In a transforming economy there is a common legacy of most companies: their low competitiveness as the result of an obsolete capital stock and overmanning, insufficient product quality that does not satisfy demand, distorted specialization patterns, high and partly ill-designed integration, suboptimal size and inadequate management capacities. Restructuring companies is therefore a challenging task.

The paper examines the painful adjustment process in eastern German manufacturing against the background of the unpleasant trade-off between the pace of wage increase and the level of transfer payments to spur investment and to finance consumption. The core question is how the performance of companies has developed with regard to ownership structure, firm size and industry. The paper

- first, analyses the dilemma from a theoretical point of view,
- second, highlights the economic repercussions of the companies' adjustment behaviour to be mirrored in the data, and
- third, draws the conclusions and provides some suggestions for further analysis.

Data used in the paper mainly come from a sample of firms under investigation of the Deutsches Institut für Wirtschaftsforschung (DIW), Berlin, since 1991 (P 52).

I Introduction¹

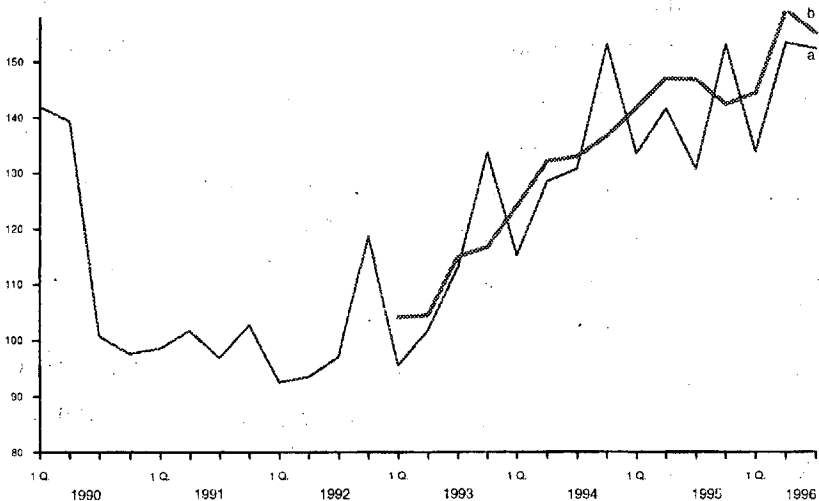
Restructuring of companies in the transition from central planning to market economy has proven to be an unprecedented challenge for businessmen and politicians alike. The socialist economy did not know "enterprises" in the usual sense, operating in a competitive environment under a hard budget constraint. Rather were the big conglomerates and their affiliates hierarchically structured and centrally commanded bureaucratic constructions, largely financed by the state budget. As a result, they all started into the process of marketization with a common legacy: low competitiveness due to an obsolete capital stock and overmanning, insufficient product design and product quality, distorted specialization and foreign trade orientation towards the former COMECON, high vertical and horizontal integration, suboptimal plant size, insufficient management capacities and, as a result, huge financial constraints compared to the needs [Jackson and Biesbrouck 1995]. Therefore, it is hardly surprising that many of them are still grappling with the problem of how to achieve break-even conditions.

This paper examines the painful process of restructuring in eastern German manufacturing. As in all transition economies, the manufacturing sector has been going through a deep crisis. Since summer 1990, when the German Economic, Monetary and Social Union (GEMSU) was estab-

¹ Research in preparation for this paper was undertaken with support from the European Commission's Phare ACE Program 1995 "Emerging Market Organization and Corporate Restructuring in Central and Eastern Europe", project no. 94-0590-R. The empirical material comes from a joint research project of the German Institute for Economic Research (DIW), Berlin, the Kiel Institute of World Economics (IfW) and the Institute for Economic Research Halle (IWH) commissioned by the German Federal Ministry of Economic Affairs. The paper was prepared for a workshop held in Vienna from 6-7 December 1996.

lished, industrial production has decreased by some 40 percent (Figure 1). Without massive government support, things would even have gone much worse. In this situation, there was only one possibility: to build up a new manufacturing structure from scratch.

Figure 1 – Time Path of Production Adjustment in Eastern German Manufacturing 1990–1996



^aIndex of industrial net production, quarterly, not seasonally adjusted. – ^bSeasonally adjusted.

Source: Central Statistical Office; own calculations.

In two respects, eastern Germany is a special case, not comparable to transition countries in central and eastern Europe.

- On the one hand, the political decision to establish the Deutschmark as currency at parity, and a sharp wage increase, bringing up eastern Germany's unit labour costs to a level more than twice as high as in the west, completely dashed the hopes for a smooth transition from

plan to market. The capital stock, which had some positive value before GEMSU, was to a great extent depreciated overnight.

- On the other hand, the huge amount of public assistance spurred the process of rebuilding the economy. Subsidies of about one third on average for private investment represented a strong incentive for western investors to engage themselves in eastern Germany.

Until now, there is no definite answer to the question whether the German "shock-approach" will be — in terms of interactions between economics and politics — more efficient than the "gradualistic approach" undertaken by central and eastern European countries.

Although industrial production has increased steadily since summer 1992 and has passed the pre-unification level by now, this cannot be interpreted as a great success. Certainly, in becoming competitive, companies have made some progress. However, the majority of them remains highly delicate and dependent on government support. With respect to competitiveness, there is still a large gap between companies in eastern and western Germany. On average, eastern German companies have just reached 55 percent of labour productivity of their western German competitors (Table 1). As a result, eastern German industrial production contributes only less than 10 percent to overall German industrial production; according to the shares in total population, it should be twice as high. The poor performance of eastern German companies is also reflected in the changing sectoral picture which appears to be clearly biased towards non-tradables industries not competing in global markets (Table 1). With foreign sales reaching only 12 percent of total sales, the export intensity of the eastern German manufacturing sector is extremely low for a small open economy (28 percent in western Germany). A rough calculation by

Naujoks [1994] shows that in 1994, 57 percent of total sales by eastern German companies were non-tradables whereas the share for western German companies was 37 percent.

Table 1 – Index of Net Production^a and Productivity Gap^b in Eastern German Manufacturing by Industries 1992–1995

	Net production (1991=100)		Productivity gap (western Germany=100)	
	1992	1995	1992	1994
Total	100.4	144.9	21.0	44.0
Manufacture of				
Basic products	92.0	123.0	9.6	36.7
Capital goods	94.0	125.4	23.2	41.8
Constructional steel and light metal	115.8	135.7	45.9	47.7
Mechanical engineering	72.0	81.7	16.9	34.8
Vehicle building	118.2	153.0	11.0	44.3
Electrical engineering	97.7	144.9	23.4	43.6
Consumer goods	102.3	137.8	26.4	54.6
Printing	128.5	153.9	70.3	97.2
Plastics	135.6	170.8	34.0	61.8
Textiles	89.2	75.3	6.7	33.8
Clothing	85.7	69.7	18.9	43.8
Food, drink and tobacco	100.1	116.8	29.4	53.4

^aIndex of Industrial Net Production; systematology of 1993. – ^bNet value added per employee; systematology of 1979.

Source: Central Statistical Office; own calculations.

Obviously, something goes wrong with the restructuring process in eastern Germany. The questions to be answered are: what are the main reasons for the persistent competitive weakness? Do companies still suffer from technological backwardness, from poor product design and quality, from false market strategies, from missing economies of scale, from insufficient financial resources, or, last but not least, from management failures caused by inexperienced entrepreneurs? These and other questions

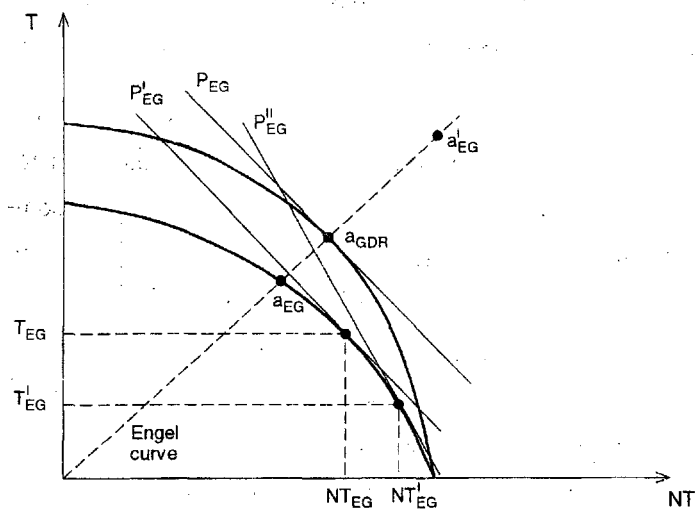
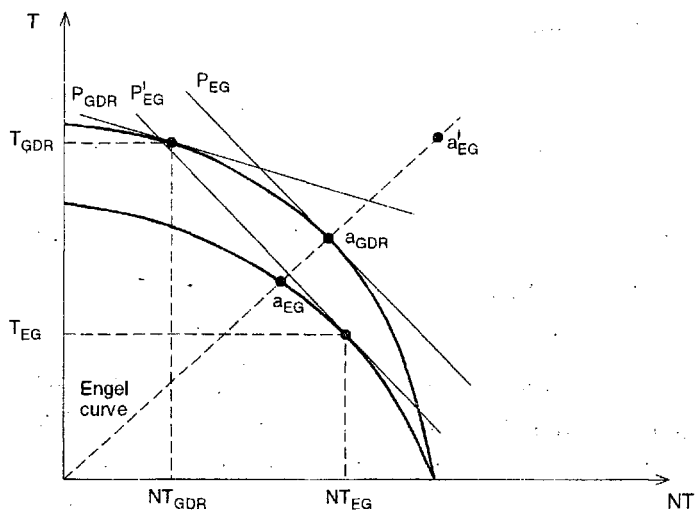
should now be put on top of the research agenda. In its own small way, this paper tries to sketch the route for such type of research.

II Theoretical Background

In order to understand the long and troublesome restructuring process in eastern Germany, it is necessary to focus once more on the special circumstances of the transition from plan to market. On the one hand, the companies have been hit by the cost effect of an unrealistic rate of currency conversion and by a sharp increase in money wages. Under these conditions, their chances for smoothly transforming into new viable structures were absolutely nil. With costs higher than sales, most of the companies were virtually bankrupt. On the other hand, as a result of massive public assistance, the opportunities for starting from scratch have been more favourable than elsewhere. Assistance for corporate restructuring has been designed with two effective spearheads: rapid privatization and heavy subsidization of investment in the capital stock. By that, ailing companies obtained what they urgently needed: fresh money for a promising new beginning.

However, there has been a considerable degree of asymmetry with respect to adjustment needs and adjustment opportunities. Generally, companies in manufacturing industries have been much more affected by the shocks than those in service industries, which are more or less shielded from international or nation-wide competition. In addition, companies in service industries have been heavily benefiting from massive transfer payments poured into eastern Germany for consumptive purposes, because they are mainly operating in local and regional markets.

Figure 2 – Relative Price Change and Structural Change in a Two-Factor Model of the Eastern German Economy Before and After GEMSU



The situation after GEMSU can be described best by a simple model which was developed in different forms by Greiner, Maß and Sell [1994], Naujoks [1994], Klodt, Stehn et al. [1995] and Sell [1995]. The model allows to distinguish between the supply and demand effects caused by GEMSU and those caused by investive and consumptive subsidies (Figure 2).

- In characterizing the situation shortly before and after GEMSU, it is assumed that the GDR economy was producing two types of goods: tradables (T) and non-tradables (NT). The production possibilities are defined by the transformation curve (TC), the allocation by the structure of relative prices (P_{GDR}). As usual in a socialist economy, the price structure was heavily distorted in favour of tradables. Thus, the transition to a market economy led to a shift of the price vector to P_{EG} : the prices for tradables decreased because they are determined by the world market, while the prices for non-tradables increased because they are determined by domestic resource costs and local demand conditions. At the same time the production possibilities frontier receded, visualized by a downward shift of the transformation curve. It is evident that this shift was more pronounced in the tradables sector being heavily affected by competition from abroad than in the non-tradables sector.
- The downward shift of the transformation curve would have implied a conversion rate of less than 1:1, say 1:2 or 1:3 as it was suggested for nominal wages, in order to bring the consumption possibilities of easterners in line with production possibilities. However, due to the sharp wage increase, consumption possibilities increased considerably which is illustrated by a move of the budget point a_{GDR} to a'_{EG} .

Since the demand exceeded the supply of domestic goods, eastern Germany's balance of trade ran into a deficit, which had to be financed by transfer payments from western Germany — the line between a_{EG} and a'_{EG} on the Engel curve gives a description of the amount of fiscal transfer necessary to close the gap between consumption and production.

- As a result of huge fiscal transfers from west to east, the resource allocation shifted once again from tradables to non-tradables producing sectors: since prices for tradables are determined by the world market, the increase in consumptive demand affected only the prices for non-tradables, illustrated by an additional shift of the vector of relative prices from P'_{EG} to P''_{EG} .

In the end, currency conversion and wage adjustment have not only destroyed a large part of the productive potential of the tradables producing sector. In combination with transfer payments, they are also a severe obstacle to restructuring it: investors have more incentives to commit to the non-tradables producing sector. So far, eastern Germany suffers from immense allocative distortions which can be labelled as a Dutch disease problem [Siebert 1995].

III Data Base

The examination of the complex adjustment process is a very challenging task for researchers. It requires an appropriate informational base. Ideally, a data base on the firm-level should be available. Realiter, however, the German Central Statistical Office provides only data on an aggregate level — by industries or by firm size — as data protection legislation in Germany is very strict. Therefore, the German Institute for Economic Re-

search (DIW), Berlin, and the Kiel Institute of World Economics (IfW), commissioned by the Federal Ministry of Economic Affairs to monitor the adjustment process in eastern Germany, decided to establish their own survey.² The first survey was started in summer 1991 with a sample of 1,700 manufacturing companies, the fourth in spring 1995 with 2,500 companies.³ In terms of employees, some 25 percent of the manufacturing sector were included. It can be assumed that the respondents form a representative sub-sample although the whole population is still unknown with respect to those variables which are considered most relevant in our paper.

In principle, the surveys can be considered as a panel since it is tried to keep the population of the sample stable. However, due to enormous fluctuations in the eastern German enterprise sphere — at the beginning, panel mortality as well as panel entry were very high — only a relatively small proportion of the panel members have longitudinal records without missing years. A fairly stable panel of respondents only exists as from 1994.

The design of the survey makes various approaches possible:

- On the descriptive level, it is possible to examine how different types of companies perform — for instance with respect to ownership, plant size or industry. In this context it is possible to answer the following questions: do companies in the ownership of western German companies perform better than other companies? Can small-sized com-

² Data collecting and data processing have been carried out by the DIW.

³ The fifth wave was started in summer 1996. The results will be available at the end of 1996.

panies cope better with wage costs than large-sized ones? Have private or privatized companies invested more than Treuhand companies?

- On the explanatory level, it is possible to test the relationships between the different sets of variables in a systematic manner. For instance, in which way has restructuring influenced productivity and profitability of companies? To what extent have financial constraints hampered necessary investments? Have subsidies caused allocative distortions, in particular overcapacities?

Nevertheless, there are some limitations which result from the survey techniques: the information is collected by a questionnaire sent by mail. Inevitably, a questionnaire cannot be too complex, covering all the areas under examination — it should not include more than 25 fully structured questions. Additionally, in order to get a high rate of return, it is necessary to avoid crucial questions. It is well known that companies are usually markedly reticent about their balance sheets and profit and loss values. Therefore, only little quantitative information concerning turnover, investment and employment is available.

IV Main Findings

The basic philosophy of restructuring the eastern German economy is that monies can buy anything, even time. For political and economic reasons, there was no time to adopt a gradualistic strategy. Therefore, the strategy for pushing the restructuring was designed with two spearheads: rapid privatization of state-owned companies and heavy subsidization of investment in the capital stock [Schmidt 1996].

- The guideline for rapid privatization was to find an investor being able to transform an ailing into a viable company. In the words of its President, the strategy of the Treuhandanstalt (a government trusteeship which had been responsible for privatization) was not selling companies but buying investors. "We give preference to an investor if he has access to sales channels, if he can close the innovation and the technology gap ... as quickly as possible and thus enable the company to survive" [Breuel 1992]. With an estimated deficit of 270 bn DM this operation has ended deeply in the red.
- The motivation for heavy subsidization was to give necessary incentives to invest. Private investors were not in a hurry to invest their money in eastern Germany, except in those industries which promised quick profits, such as retail trade and real estate. As a rule, they had to take into account negative externalities in form of the poor state of traffic and communication infrastructure, bottlenecks in the administrative organization or difficulties in clearing up the restitution claims. Until now, total transfers to eastern Germany amounted to roughly 1 trillion DM of which 350 billion DM were paid for financing public and subsidizing private investment.

It is important to understand privatization and subsidization as a package: since a government institution would not have been able to restructure thousands of bankrupt companies, it had to buy private investors for doing so. Without massive subsidies, such a process of restructuring would not have started quickly.

1 Ownership Structure and Overall Performance

The importance of rapid privatization for the restructuring process is impressively documented by the changing pattern of the ownership status of companies (Table 2). In summer 1991 still 86 percent of eastern German manufacturing companies with 92 percent of total employees were in the ownership of the Treuhandanstalt. Until spring 1995 the share has been brought down to 1 percent and 5 percent, respectively. Interestingly, the overwhelming majority of previously state-owned companies were privatized, not reprivatized to former rightful owners. Although the Privatization Law provided for restitution to assume priority before fresh privatization, this has been partly overturned by the so-called Investment Act and, respectively, Investment Priority Act. Since the government was interested in quick restructuring, the former owner, as a rule, was only given preference if he agreed to make the same investments as another would-be investor. As a consequence, many former owners, not willing or able to invest much money, were pushed into a subordinate position compared to those potential purchasers promising high investments.

Privatization in the transition process involved both privatizing existing companies and founding new companies. Meanwhile, new firms' start-ups have clearly surpassed the number of previously existing companies. However, these obvious dynamics seem to be mostly restricted to the category of small and medium sized companies because they only account for 20 percent of all employees in total manufacturing as opposed to 60 percent in privatized Treuhand companies.

Table 2 – Firms and Employees in the Eastern German Manufacturing Sector According to Ownership Status (percent) 1991–1995

	Summer 1991		Summer 1992		Winter 1993/94		Spring 1995	
	Firms	Em- ployees	Firms	Em- ployees	Firms	Em- ployees	Firms	Em- ployees
Private firms	14	8	66	41	94	76	99	95
of which:								
Privatized Treuhand-firms	X ^a	X ^a	48 ^b	36 ^b	41	55	34	60
Reprivatized Treuhand-firms	X ^a	X ^a	.	.	20	8	17	13
Private firms before 1990	X ^a	X ^a	5	2	7	5	5	2
Firms founded after 1989	X ^a	X ^a	13	3	26	7	43	20
Firms owned by the Treuhand or Treuhand-successors	86	92	34	59	6	24	1	5
All firms	100	100	100	100	100	100	100	100
Note:								
Independent firms	9	1	49	19	80	42	77	45
Firms owned by western German or foreign firms	5	7	17	23	14	34	22	50

^aToo few to mention. – ^bIncluding reprivatized firms.

In spring 1995, more than two thirds of all private companies in eastern German manufacturing were "independent" units in the hands of eastern German owners. But here again eastern Germans seem to focus mainly on small-scale production, in particular in the craft sector: "independent" companies only account for 45 percent of employees as opposed to 50 percent in "dependent" firms of western German-owned or foreign-owned companies.

The object of comparison in this paper is the performance of certain types of companies included in the sample relative to other types. However, performance is a fuzzy concept which can be defined in several ways. Since the questionnaire could not cover more than a few areas set out under the heading of this variable, there are necessarily some restrictions. As proxy for performance, a bundle of characteristics is used such as the assessment of companies with regard to their competitiveness, their size of order books, their use of capacity and, last but not least, their profitability.

Table 3 – Shares of East German Manufacturing Firms Facing Competitiveness Problems 1991–1995 (in percent of firms)

	Summer 1991	Summer 1992	Winter 1993/94	Spring 1995
<i>Ownership status</i>				
Private firms	62	57	55	52
of which:				
Privatized Treuhand-firms	X ^a	62 ^b	60	55
Reprivatized Treuhand-firms	X ^a		64	65
Private firms before 1990	X ^a	58	51	48
Firms founded after 1989	X ^a	41	45	46
Note:				
Independent firms	73	59	55	55
Firms owned by western German or foreign companies	56	52	56	45
Firms-owned by the Treuhandanstalt or its successor organizations	88	84	82	53
<i>Size</i>				
Firms with ... employees				
1 to 19	75	61	51	52
20 to 49	81	63	55	54
50 to 99	78	67	63	54
100 to 199	84	65	65	47
200 to 499	85	73	63	48
500 and more	92	78	77	58
<i>Selected industries</i>				
Quarrying	72	39	40	37
Iron and steel, non-ferrous metals and foundries	87	74	59	67
Chemicals	87	70	63	56
Metal shaping/metal cutting	87	65	59	50
Constructional steel and light metal	72	58	62	62
Mechanical engineering	84	77	65	58
Vehicle building	79	51	75	48
Electrical engineering	87	71	58	44
Sheet metal products	82	65	49	54
Wood processing	80	61	54	50
Paper and paperboard	91	67	62	50
Printing	77	53	40	57
Plastics	82	62	48	48
Textiles and clothing	90	74	62	61
Food, drink and tobacco	83	63	59	54
All firms	84	66	57	52

^aToo few cases to mention. – ^bIncluding reprivatized firms.

According to the survey findings, all categories of companies, privatized, re-privatized and newly founded ones, are facing serious competitiveness

problems (Table 3). Although their situation has improved significantly over recent years, more than half of the companies stated in spring 1995 that they were experiencing great difficulties maintaining their market position. For comparison: in summer 1991 the share was almost 90 percent.

A closer look, however, reveals a somewhat different picture:

- Companies owned by the Treuhand or by the Treuhand successor organizations have been the least competitive: from summer 1991 until winter 1993/94, companies facing problems formed a great majority (more than 80 percent). This is not surprising because companies that took a long time to get privatized or companies that have not been privatized at all so far are on the whole the least promising ones. They often belong to sectors which in western countries have been in a crisis for a long time. More striking, however, is the fact that the share of companies having trouble with competitiveness declined sharply from 82 percent in winter 1993/94 to 53 percent in spring 1995, which is even below the share relevant to reprivatized companies, viz. 65 percent. This may be explained by the fact that recently, many loss-making Treuhand companies, which did not find an investor, were closed down.
- Reprivatized companies do not seem to be better off than non-privatized companies: in 1993/94 and 1995 more than 60 percent were facing competitive problems. Frequently, these companies had to be handed over to the heirs of the former owner who often had no experience or even no interest in running a business successfully. This may support the view that the partial replacement of restitution by fresh privatization under the Investment Act and, respectively, the Investment Priority Act proved its worth. However, the poor perform-

ance may also be explained by poor starting conditions: the owners of reprivatized companies often complained that, because they had to accept historic debts or the damage of historic pollution, they were often treated worse than investors in fresh privatizations, which were partly or completely let off these obligations by the Treuhandanstalt [Müller 1996].⁴

- Companies privately owned before 1989 or founded thereafter have started more successfully into the market economy compared to previous Treuhand companies. Clearly, these companies have suffered less from the heritage of the past than former state-owned companies. As they are small in size, they have often found a profitable niche. Nevertheless, the first category has more and more difficulties in withstanding market pressure. The declining performance of the older companies is mainly a structural problem, as they are exclusively operating in the traditional retail trade and crafts-sector, the only private business which was of some importance in the GDR.
- Finally, western German- or foreign-owned companies report competitiveness problems to a lower degree than independent companies in the ownership of easterners. However, the difference between the two categories is smaller than might have been expected. At first glance, the ownership by a western partner does not appear to be a crucial advantage. However, this result may be affected by other variables such as firm size or type of industry, considering that the Treuhandanstalt tended to sell large companies, in particular in "sen-

⁴ The majority of companies had already been transferred to their former owners in the short time from January to March 1990 during which the Modrow government was in power.

sitive branches", mostly to westerners. Data evaluated suggest that restructuring these companies is more painful than restructuring small and medium sized companies in other branches.

Some problems have proved particularly thorny throughout the years of restructuring: the rapid wage increase, the persistent or even rising pressure of competition and the severe financial constraints (Table 4). Often these problems are strongly interrelated: frequently increasing costs are causal for the growing competitive pressure and this again is causal for profit and liquidity squeezes.

Table 4 – Selected Problems Perceived by Eastern German Manufacturing Firms 1991–1995

	Share of firms facing ... as a problem			
	Summer 1991	Summer 1992	Winter 1993/94	Spring 1995
Customers in arrears	–	–	–	59
Shortage of equity capital	–	–	–	52
Rising pressure of competition	–	–	–	50
Liquidity crisis	–	–	–	49
Wages and salaries rising too fast	31	44	41	43
Lack of finance for investments	53	49	39	43
Lack of skilled labour	6	17	20	27
Suppliers of similar products are cheaper	–	22	26	26
Clumsy local administration	–	28	25	26
Outdated equipment/buildings	38	38	28	23
Insufficient sales distribution	46	39	18	22
Insufficient local infrastructure	15	28	18	17
Insufficient land/estates	–	13	14	16
Insufficient qualification of workers	14	13	10	9
Insufficient after-sales service	–	13	10	6
Insufficient product quality	7	7	4	2
Equipment/buildings too large	16	16	10	–
Key staff have left firm	6	7	3	–

On the other hand, the share of companies operating with outdated plants and insufficient distribution facilities has clearly declined. This suggests that initial steps in the restructuring process have been successful. What has to come next are the steps of consolidation — for instance: raising

productivity and cutting costs, penetrating markets, realizing scale economies and, last but not least, turning losses into profits and widening the base of equity capital.

2 Productivity Gap and Wage Pressure

After reunification, a quick adjustment of east German real wages to the west German level was seen as an important strategy in order to prevent massive migration from east to west. By now, eastern German effective wages have reached on average 75 percent of western German wages. This is a particularly grave problem because productivity is substantially lagging behind: despite heavy capital investment, it has reached only about 55 percent of the western German level. This results in unit labour costs which are 35 percent higher than in the west.

However, data suggest that only less than one half of the companies consider rising labour costs a serious problem. Obviously, the spread in wages paid by companies as well as in productivity is very wide. Therefore, it might be interesting to examine which categories of companies are especially prone to suffering from this problem. As a proxy for wage cost pressure the assessment of companies with respect to their profit situation was used (Table 5).

- Looking first at the ownership status, one can conclude that private firms founded before as well as after the collapse of the old system have less trouble to cope with rising labour costs than previous or current Treuhand firms. Only a relatively small share of private firms report significant losses, almost one half reached reasonable or small profits. Clearly, these firms are not suffering from the heritage of the past. The result is not self-evident, though.

- Looking second at firm size, the picture becomes much clearer: smaller firms, most of which were newly founded, are operating on average in a more profitable way than larger ones. One reason for this is that smaller firms have more opportunities than larger ones to find a profitable niche. More important, however, is that the overwhelming majority of these firms falls short of paying standard wages. They avoid becoming members of the employers associations and can, therefore, fix individual agreements with their workers.
- Looking finally at the type of industry, it can be said that companies facing tough international competition are most heavily afflicted by the wage pressure problem. Apart from companies in old-fashioned industries like iron and steel, non-ferrous metals and foundries or textiles and clothing, a high share of eastern German companies in industries which should have a good standing on international markets, like chemicals and mechanical engineering, report significant losses, too. In contrast, companies in construction-related branches, which mainly serve the booming local market, report a more positive profit situation. Exceptions are given on the one hand by the vehicle building industry, an internationally competing industry which shows a satisfactory profit situation due to newly established, highly productive plants owned by western German companies and, on the other hand, by the industries producing food, beverages and tobacco, which include a surprisingly high share of firms reporting significant losses, although they are mainly serving local markets.

Table 5 – The Profit Situation Perceived by Eastern German Manufacturing Firms 1994 and 1995

	Percentage of firms achieving in 1994 ...				Profits in 1994 not estimable	Percentage of firms expecting in 1995 ...				Profits in 1995 not estimable
	reasonable profits	low profits	a balanced result	significant losses		reasonable profits	low profits	a balanced result	significant losses	
<i>Formation/ownership status</i>										
Private firms	14	23	28	31	4	13	31	37	9	9
of which:										
Privatized Treuhand-firms	11	19	26	41	3	12	28	41	13	7
Reprivatized Treuhand-firms	10	20	25	40	5	16	36	27	9	12
Private firms founded before 1990	18	29	26	25	3	16	36	27	9	12
Firms founded after 1989	18	27	31	19	5	16	36	34	4	10
Firms owned by Treuhand-successors	3	9	16	69	3	0	19	22	56	3
<i>Note:</i>										
Independent firms	14	24	28	29	5	13	32	37	7	10
Firms owned by western German or foreign firms	14	20	28	36	3	12	27	42	12	7
<i>Size</i>										
Firms with ... employees										
1 to 9	16	22	32	24	6	12	30	36	8	14
10 to 19	16	27	29	24	4	15	35	34	6	10
20 to 49	12	27	29	29	4	13	35	38	6	9
50 to 99	13	19	23	41	3	12	28	45	10	5
100 to 199	14	17	25	40	4	11	30	38	14	7
200 to 499	13	14	24	46	3	14	18	37	26	6
500 and more	9	11	30	45	4	8	21	34	32	6
<i>Selected industries</i>										
Quarrying	23	29	22	20	6	19	33	31	6	10
Iron and steel, non-ferrous metals, foundries	2	17	23	54	3	6	29	46	16	3
Chemicals	18	17	34	30	1	20	21	40	11	7
Metal shaping/metal cutting	10	23	27	32	8	14	28	36	9	14
Constructional steel and light metal	15	28	22	32	4	14	31	41	7	7
Mechanical engineering	10	19	34	34	3	8	33	38	11	10
Vehicle building	16	17	29	29	7	14	20	44	9	13
Electrical engineering	15	25	29	27	4	14	35	34	10	7
Sheet metal products	12	24	35	24	4	11	36	36	8	9
Fine ceramics, glass	11	32	15	38	4	15	28	45	9	4
Wood processing	17	23	25	29	6	12	38	34	5	12
Paper and paperboard	11	40	26	22	2	16	36	40	2	6
Printing	20	13	34	29	5	12	34	35	7	13
Plastics	18	24	29	27	2	21	34	36	3	7
Textiles and clothing	10	17	29	35	9	9	24	45	9	13
Food, drink and tobacco	17	21	25	33	2	11	31	31	15	12
<i>All firms</i>	14	23	28	31	5	13	31	37	9	9

Actually, companies are in a permanent race against rising wage pressure. At the beginning of the restructuring process, they were very successful. They were able to substantially increase productivity by reducing overemployment. However, this potential is now exhausted. In order to reduce the huge gap compared to their competitors in the west, they have

to invest massively. In fact, investment activity has been impressive. In recent years about 30,000 DM per employee and per year have been invested on average, 50 percent more than in western German manufacturing (Table 6). Although the dynamics has somewhat declined since 1993, the level of investments has remained relatively high.

Table 6 – Investment per Employee^a in Eastern German Industry 1993–1995 (in DM)

	1993	1994	1995 ^b
<i>Formation/ownership status</i>			
Private firms	32 200	26 100	26 600
of which:			
Privatized Treuhand-firms	29 500	24 200	26 800
Reprivatized Treuhand-firms	31 800	34 500	21 100
Private firms before 1990	29 100	27 100	28 300
Firms founded after 1989	41 700	26 700	29 100
Firms owned by Treuhand-successors	47 600	83 400	27 200
Note:			
Independent firms	19 400	19 700	19 600
Firms owned by western German or foreign firms	41 300	30 700	31 600
<i>Size</i>			
Firms with ... employees			
1 to 9	41 400	33 100	51 400
10 to 19	35 100	24 100	33 600
20 to 49	27 000	25 100	24 300
50 to 99	22 400	23 000	18 200
100 to 199	23 000	40 500	26 100
200 to 499	36 200	29 000	30 800
500 and more	43 900	27 700	27 300
<i>Keeping of investment engagements towards the Treuhand</i>			
Private firms which ...			
broke their engagements	30 900	21 200	24 900
kept their engagements and ...	33 600	29 300	28 100
invested more than promised	42 300	34 600	25 900
invested as much as promised	22 500	24 400	32 100
invested less than promised	15 400	13 300	32 300
All firms	32 900	29 100	26 800

^aJanuary 1995. – ^bProjections.

However, aggregate figures conceal once more major differences between categories of companies:

- One striking difference is that between independent and western German- or foreign-owned firms: investment per employee of the latter exceeded that of the former by more than 20,000 DM in 1993

and by more than 10,000 DM in 1994 and 1995. This is mainly the result of severe financial constraints of independent eastern German firms, which do not exist for affiliates of western German or foreign companies. On the other hand, investment in western German- or foreign-owned companies seems to be much more volatile as to economic repercussions than investment in independent firms, which has basically remained constant over the given period.

- Another striking difference is that between small and large companies. Surprisingly, small firms invested much more than large ones. This can probably be explained by the fact that small firms are usually young firms which started from scratch. They have to build up a certain capital stock before becoming workable. Later, they have to increase their capacities in accordance with their growing business activities.

Another significant difference between small and large, respectively young and old companies are their diverging investment objectives (Table 7). The small and, respectively, young ones invested a relatively high share for reasons of expansion, the large and, respectively, old ones for reasons of replacement. Investment in companies in the hands of the Treuhandanstalt or its successor organizations, which reported surprisingly large figures of investment per employee in 1993 and 1994, was by almost two thirds dedicated to modernization and rationalization. These companies were also subject to extensive restructuring measures. By this sort of "window dressing" the Treuhandanstalt tried to attract potential investors.

Table 7 – Investment Objectives of Eastern German Manufacturing Firms in 1995

	Share of investing firms which mentioned as their main objective ...		
	Expansion	Modernization/ rationalization	Replacement
<i>Formation/ownership status</i>			
Private firms	14	55	31
of which:			
Privatized Treuhand firms	10	56	34
Reprivatized Treuhand-firms	6	58	36
Private firms before 1990	14	62	24
Firms founded after 1989	21	53	26
Firms owned by Treuhand-successors	4	63	33
Note:			
Independent firms	14	57	29
Firms owned by western German or foreign firms	13	51	36
<i>Size</i>			
Firms with ... employees			
1 to 9	23	50	27
10 to 19	17	56	27
20 to 49	10	58	32
50 to 99	11	58	32
100 to 199	10	54	37
200 to 499	14	53	34
500 and more	2	61	37
<i>All firms</i>	14	56	31

Nevertheless, in terms of productivity increase, the results of the enormous efforts taken are disappointing. Certainly, at the end of 1995 output per worker was three times as high as at the end of 1990. This, however, was mainly due to the massive cuts in the volume of working hours, a process which was more or less finished by the end of 1993. More recently, the rise in productivity significantly slowed down. The gap in terms of unit labour costs has not yet narrowed; in the second half of 1996 it has even widened. Against the background of the enormous investments which have been implemented, this is not easy to explain. Although the capital stock per employee is still much lower than in western German manufacturing — on average it has reached a level of about 60 per cent — this does not seem to be the main problem. According to the surveys, the proportion of companies with outdated plants and equipment is in decline: in spring 1995 it amounted to one quarter only. Interestingly, the proportion of companies which report a backlog in modernizing business premises, machinery and vehicle fleet is the highest among the

small independent firms — where investment per capita is clearly above that of larger companies. It is not easy to solve this puzzle.

3 Firm Size and Market Access

There is some evidence that the origin of the problems must be sought not only on the supply side but also on the demand side. Many companies complain about insufficient sales opportunities. Such companies are to be found in every branch and every size category, in independent firms and in western German- and foreign-owned subsidiaries. However, very small and very large companies tend to suffer somewhat more from a weak market position than the other size categories:

- On average, 20 percent of all companies reported in spring 1995 that their order situation was unsatisfactory, among firms with 1 to 9 employees the share even amounted to 27 percent (Table 8). The same holds with respect to capacity utilization where the figures were 29 percent and 39 percent, respectively. Obviously, very small firms have more difficulty in finding access to market and maintaining their market position than larger ones. This might be due to their lack of resources, which makes it tough for them to build up and develop market activities, distribution channels and, last but not least, reputation. As a matter of consequence, these firms find it extremely difficult to be admitted to the procurement lists of the major retail chain stores, which usually expect from their suppliers just-in-time deliveries, large series of standardized products, customizing and sales promotion activities. Not surprisingly, the very small companies suffer more than their larger competitors from an unsatisfactory utilization of

capacities which — per se — pushes up overhead costs and affects price competitiveness.

- The sales problems of very large companies of 500 and more employees — 29 percent complained about their unsatisfactory order situation and 33 percent about their weak capacity utilization — are different from those of very small firms. As already stated, this category includes many companies that are hard to privatize or that continue to be in the ownership of the Treuhandanstalt's successors. Many of these companies are operating in branches suffering from structural overcapacities such as chemicals, iron and steel and ship-building which still have to undergo fundamental restructuring, including reduction of overcapacities.

There is not much evidence for the hypothesis that western German- or foreign-owned companies have better access to markets and to global networks of production than independent firms. Privatized firms give on average a positive report concerning use of capacity and situation of orders — in contrast to re-privatized ones that account for the highest share of all firms assessing their use of capacity and also their order situation as "rather bad". This is possibly due to the lack of motivation and experience of the heirs of the former owners, which causes deficiencies concerning market access. The most successful firms in terms of use of capacity and orders are those founded after 1989. Three important factors might have contributed to their success: first, the fact that newly founded firms in eastern Germany are concentrated in the most promising branches, namely serving only local markets or being related to the booming construction sector; second, that these firms benefit from the motivation and qualification of their owners; and third, that they are not burdened with the

heritage of the past like many of their competitors which already existed under the socialist regime.

Table 8 – Capacity Utilization and Order Situation as seen by Eastern German Manufacturing Firms in 1995

	Share of firms assessing their utilization of capacity as			Share of firms assessing their order situation as		
	rather good	satisfactory	rather bad	rather good	satisfactory	rather bad
<i>Formation/ownership status</i>						
Private firms	21	51	28	29	51	20
of which:						
Privatized Treuhand-firms	21	52	27	29	52	19
Reprivatized Treuhand-firms	15	45	40	24	48	28
Private firms before 1990	16	51	33	24	55	21
Firms founded after 1989	25	51	24	32	52	16
Firms owned by Treuhand-successors	19	49	32	22	56	22
Note:						
Independent firms	20	51	28	29	52	19
Firms owned by western German or foreign firms	25	48	28	30	49	21
Size						
Firms with ... employees						
1 to 9	15	46	39	22	51	27
10 to 19	20	52	28	29	52	19
20 to 49	23	51	25	31	53	16
50 to 99	23	52	25	33	48	19
100 to 199	23	51	27	31	51	18
200 to 499	23	53	24	32	53	15
500 and more	19	48	33	26	45	29
<i>Selected industries</i>						
Quarrying	17	46	38	24	55	21
Iron and steel, non-ferrous metals, foundries	20	63	18	29	60	11
Chemicals	12	40	48	21	54	25
Metal shaping/metal cutting	31	47	22	47	37	16
Constructional steel and light metal	25	54	21	36	47	17
Mechanical engineering	25	52	23	29	54	17
Vehicle building	30	50	20	43	40	17
Electrical engineering	21	49	30	30	46	25
Sheet metal products	17	58	25	25	59	16
Fine ceramics, glass	22	53	25	30	64	6
Wood processing	18	50	32	23	52	25
Paper and paperboard	28	39	33	26	51	24
Printing	11	57	32	23	62	15
Plastics	24	49	26	36	49	15
Textiles and clothing	19	52	29	23	55	22
Food, drink and tobacco	11	49	40	20	53	27
All firms	21	50	29	29	51	20

4 Geographic Distance and Market Shares

The main problem for eastern German companies is their low competitiveness in interregional and international markets. The main sales markets are local and regional markets in eastern Germany — almost half of the overall turnover was realized there in 1995. Another third was attained

in western Germany. Western and eastern foreign markets still play a subordinate role. Since 1993 there has been a shift in regional sales structures in favour of western German markets but not in favour of international markets (Table 9).

Table 9 – Regional Distribution of Turnover of East German Manufacturing Firms in 1994

	Share of turnover obtained ...				
	nearby ^a	somewhere else in east Germany	somewhere else in west Germany	in eastern Europe	in other countries
<i>Formation/ownership status</i>					
Private firms	18	32	31	7	12
of which:					
Independent firms	26	33	32	3	6
Firms owned by western German or foreign firms	15	31	31	9	14
of which:					
Privatized Treuhand-firms	15	31	34	8	12
Reprivatized Treuhand-firms	20	39	24	9	8
Private firms before 1990	44	25	25	1	5
Firms founded after 1989	27	32	28	3	10
Firms owned by Treuhand-successors	24	40	23	8	5
<i>Size</i>					
Firms with employees					
1 to 9	55	23	19	1	2
10 to 19	45	26	26	1	2
20 to 49	31	35	28	2	4
50 to 99	18	36	32	5	9
100 to 199	22	34	30	6	8
200 to 499	18	34	31	7	10
500 and more	10	30	32	11	17
<i>Selected industries</i>					
Stone, sand and clay industries	43	48	8	0	1
Iron and steel, non-ferrous metals, foundries	2	22	55	1	20
Chemical industry	4	46	19	18	13
Constructional steel and light metal	22	30	33	13	2
Mechanical engineering	6	24	32	19	19
Electrical engineering	12	23	36	5	24
Metal products	12	38	39	2	19
Wood processing	16	41	36	2	5
Printing	63	18	18	0	1
Plastic industry	18	23	40	7	12
Textiles	12	22	49	1	16
Food and beverages	31	47	13	5	4
<i>Location of competitors</i>					
Firms whose main competitors are located ...					
nearby	71	17	8	1	3
nearby or somewhere else in east Germany	34	51	12	0	3
in west Germany or abroad	8	24	42	9	17
anywhere	18	42	25	8	7
All firms	19	33	30	7	11
Note: 1993	19	36	27	8	10

^aWithin a radius of 30 kms.

It is not surprising that small firms, in particular, tend to demonstrate their competence on local rather than on nation-wide and international mar-

kets: in 1995, firms with less than 9 employees achieved 55 percent of their total turnover within a radius of 30 kms. However, larger firms — and among them even companies owned by western German or foreign companies — have a relatively high share of their customers in the vicinity. As a consequence, the total share of firms locating their main competitors nearby is considerable.

These figures indicate that a competitive export base has not yet been established. Too many companies have lost most of their traditional export-markets in the former socialist economies, but until now too few have found access to those in western market economies. To a certain extent, this might reflect the suboptimal size and branch structure of eastern German manufacturing: the very high share of smaller firms and branches not producing for supra-regional markets. But this might also express a lack of competitiveness which makes itself felt on international markets rather than on local markets.

There is a general lesson to be learned from this for the process of restructuring: quick privatization and heavy subsidization are not enough to guarantee an immediate success in the hunt for market shares on a global level. Establishing a firm position in nation-wide and international markets obviously requires some competition experience which can only be gained with time. As stated above, entering international markets is a stepwise process and the state cannot force it by granting high financing support. Money cannot buy everything, various things need time.

5 Restructuring and Financial Problems

Since many companies are operating in the red it is not surprising that they face heavy financial constraints, too. The lack of financial resources

is a general problem of companies in the transition process. However, companies in eastern Germany started well-equipped into the market economy. During the process of privatization, the companies were dressed with equity capital by the Treuhandanstalt (according to the normal level in western Germany) and were released from old debts. It was expected that the capital base thus obtained would enable the companies to survive the troublesome restructuring period until they would become competitive on their own.

However, persistently poor market performance and cost pressure, mainly due to wage increase, caused the capital base to be eaten up fast and left many companies with financial constraints. This can be seen in Table 4, where problems related to finance, i.e. lack of equity, lack of liquidity, customers in arrears and lack of finance for investment, appear among the six foremost problems which companies covered by this survey reported in spring 1995.

The strong correlation between wage pressure and competition pressure on the one hand and financial constraints on the other, can also be derived from Table 10: 49 percent of the companies in the survey suffering from rising wages and 51 percent of those suffering from increasing competition reported a significant shortage of equity at the same time. A specific characteristic of those companies is their weakness concerning field sales and distribution. In order to gain access to nation-wide and international markets, companies need financial resources to develop their own distribution channels and marketing activities so that they can overcome major problems with sales and distribution, customer service and product image. If these resources are scarce, companies do not have a chance to attract customers, to improve their profit situation and to build

up a capital base on their own. Moreover, if the share of equity capital in a firm is low and the share of loan capital high, the well-known leverage risk causes a deterioration of the profit situation and a higher risk of the firm going bankrupt.

In a world of perfect markets, companies could easily satisfy their demand on the capital market. However, there are two main barriers for companies in eastern Germany which do not benefit from the international resources of a parent company to overcome their financial constraints: on the institutional side, the market for risk capital for companies which do not have access to the organized spot markets is underdeveloped; on the market side, eastern German companies, especially those which were newly founded and those which already have a poor equity base, present a considerable risk for banks because the probability of a failure of such companies is high. Thus, many banks are very reluctant to provide credit, leaving them with a lack of financial resources, which are necessary for them to invest and to build up a potential for market access. This gives rise to a kind of vicious circle: without a clear perspective of successful market performance, firms remain in the "high-risk category" and find it more and more difficult to get access to the banks' credit facilities. In this case, the only way for companies to obtain the necessary capital resources is by finding access to special government support programs.

Table 10 – Independent East German Manufacturing Firms with and without Equity Problems according to Selected Characteristics 1995

	Equity capital is ...		
	a big problem	a slight problem	no problem
	Of these firms ... percent mentioned ...		
<i>Weaknesses of firms^a</i>			
Product pricing	18	13	11
Product quality	5	6	5
Keeping the delivery date	9	8	7
Customer service	12	8	4
Product image	16	12	8
Customer contacts	9	8	6
Field sales	38	30	21
Distribution	34	26	19
Purchasing	18	14	10
<i>Situation of orders</i>			
Rather good	25	35	39
Satisfactory	54	51	50
Rather bad	22	15	12
<i>Utilization of capacity</i>			
Rather good	18	23	25
Satisfactory	50	55	52
Rather bad	32	21	23
<i>Profit situation in 1994</i>			
Significant losses	34	20	20
Balanced result	30	27	25
Low profits	22	28	25
Acceptable profits	10	21	26
No comment	4	4	4
<i>Grave problems of firms^a</i>			
Old equipment	32	17	10
Insufficient distribution	29	19	12
Comparable suppliers are cheaper	26	21	22
Lack of finance for investment	73	24	9
Liquidity crisis	76	28	18
Wages rise too fast	49	39	35
Non-optimal working process inside firm	17	14	12
Rising competition pressure	51	42	46
<i>Firm has grave problems altogether</i>			
Yes	70	37	32
No	30	63	68

^aMultiple responses possible.

6 Longitudinal Evaluation

At first glance, the overall picture might suggest that in recent years the distribution of those companies that can withstand competitive pressure without great difficulty and those companies that are clearly facing problems has remained virtually unchanged. However, the results from a longitudinal evaluation — included were only companies which could be clearly identified in the two surveys of 1993 and 1995 — reveal some diverging trends.

- Roughly one third of the companies experiencing significant competitiveness problems in 1993 had overcome them in 1995, two thirds have not made a decisive progress (Table 11).
- Two fifths of the companies that, by and large, were operating without serious problems in 1993 suffered from such problems two years later.

From the longitudinal evaluation we can learn that the scenery is still in motion: many of the companies have improved their situation in recent years, while many others have experienced a deterioration. Although especially companies owned by west German or foreign companies have, as it seems, been able to cope with their problems, there is no dominating pattern: all types of companies appear to be more or less susceptible to competitiveness pressure.

Table 11 – East German Manufacturing Firms^a having Competitiveness Problems in 1993 and 1995 (percent)

	Firms having competitiveness problems in 1993			Firms not having competitiveness problems in 1993			Note: Firms having competitiveness problems	
	All	of which:		All	of which:		1993	1995
		Firms with problems in 1995	Firms without problems in 1995		Firms without problems in 1995	Firms with problems in 1995		
<i>Ownership status^b</i>								
Private firms	100	69	31	100	60	40	54	55
of which:								
Privatized Treuhand-firms	100	66	34	100	57	43	62	58
Reprivatized Treuhand-firms	100	73	27	100	53	47	61	63
Private firms before 1990	100	75	25	100	61	39	36	52
Firms founded after 1989	100	68	32	100	67	33	44	49
of which:								
Independent firms	100	71	29	100	58	42	53	57
Firms owned by western German or foreign firms	100	60	40	100	69	31	55	47
Firms owned by the Treuhand or Treuhand-successors	100	58	42	100	0	100	80	67
<i>Size^b</i>								
Firms with ... employees								
1 to 9	100	66	34	100	46	54	51	54
10 to 19	100	72	28	100	63	37	51	55
20 to 49	100	71	29	100	56	44	52	58
50 to 99	100	65	35	100	57	43	59	56
100 to 199	100	61	39	100	73	27	59	47
200 to 499	100	69	31	100	59	41	52	56
500 and more	100	85	15	100	22	78	77	73
<i>Selected industries^b</i>								
Stone, sand and clay industries	100	65	35	100	73	27	41	43
Iron and steel, non-ferrous metals, foundries	100	57	43	100	50	50	51	53
Chemical industry	100	84	16	100	63	37	61	66
Metal shaping/metal cutting	100	61	39	100	65	35	61	51
Constructional steel and light metal	100	78	22	100	38	62	61	72
Mechanical engineering	100	70	30	100	63	37	62	57
Vehicle building	100	62	38	100	60	40	62	54
Electrical engineering	100	63	37	100	80	20	58	46
Metal products	100	63	37	100	60	40	49	52
Wood processing	100	62	38	100	63	37	52	50
Paper and paperboard	100	57	43	100	73	27	56	44
Printing	100	100	0	100	52	48	23	60
Plastic industry	100	58	42	100	64	46	51	47
Textiles and clothing	100	72	28	100	40	60	57	66
Food, beverages and tobacco	100	68	32	100	64	46	50	53
All firms	100	69	31	100	60	40	54	55

^aFirms participating in both surveys. – ^bSpring 1995.

V Policy Conclusions

The fundamental economic problem in eastern Germany is the inadequate competitiveness of many manufacturing companies. The most evident symptoms are, compared to western German companies, high (unit) labour costs, low sales and severe financial constraints. Rapid privatization and massive subsidization of investments, the two spearheads of the policy for German unification, have partly failed their targets. Corporate restructuring in eastern Germany is increasingly a Herculean task requiring money **and** time.

Table 12 – Total Costs^a in Relation to Gross Output in Eastern German Manufacturing 1991–1994

	1991	1992	1993	1994	Note: Western Germany 1994
Total	120.7	118.5	112.6	108.3	98.8
of which:					
Basic products	126.7	124.7	117.1	108.3	99.7
Stone, sand and clay industries	116.5	105.4	101.6	98.8	92.6
Chemicals	129.9	135.4	130.0	116.8	97.5
Capital goods	123.5	119.4	116.4	111.5	99.8
Mechanical engineering	126.3	131.8	126.0	120.4	100.0
Vehicle building	115.8	116.8	113.9	103.4	99.2
Electrical engineering	126.4	121.0	113.5	111.0	100.7
Consumer goods	143.1	122.2		103.9	97.0
Food, drink, tobacco	106.1	106.3	102.1	101.5	97.2

^aIntermediate consumption, wages and salaries, rents and leases, depreciations, interests paid for outside capital, cost taxes.

Source: Central Statistical Office.

What has to happen if German unification is to prove an economic success after all? There is no lack of government support for the eastern German industry. It is the rapid upward adjustment of wages to the western levels that is making it so difficult to swiftly raise competitiveness. As the results from the official Cost-Structure Statistics suggest, the compa-

nies are operating deeply in the red — with total costs exceeding gross output by about one tenth in 1994 (Table 12).

The problem is the grotesque mismatch between absorption and production or between transfer for supporting consumption and for supporting investment. As a result, the non-tradables, not the tradables sector has attracted most of the capital and qualified labour-force and has made the most rapid progress in the restructuring process. From the model developed in section II of our paper, we can learn that there are only two possibilities for overcoming this problem:

- First: the government could stop all consumptive transfers to eastern Germany. This would bring consumption possibilities of easterners in line with output possibilities and — as a result — change the relative prices and the allocation in favour of tradables. It is evident that there is no realistic chance for implementing such a strategy.
- Second: the government could concentrate its support on tradables — on companies operating in supra-regional markets. Accordingly, many German economists and policy makers are in favour of prioritizing companies in the "export sector", which might include many branches of the manufacturing industry, but also some branches of producer-related services. The crucial point is: it is virtually impossible to accurately identify companies constituting the export basis of a region according to operational criteria. Frequently, so-called "local players" are important links to export chains as was shown in the literature on industrial districts.

Obviously, a government cannot reach both targets at the same time: to promote easterners' possibilities to consume and their opportunities to produce.

As long as eastern Germany's manufacturing industry remains weak, the other sectors will be unable to grow to the extent required, and it will prove impossible to reduce the huge current account deficit with the rest of the world. Thus, progress in the manufacturing industry is, in the final analysis, the yardstick by which the success of the transformation from a centrally planned to a self-sustaining and prosperous market economy is to be measured. Seen from this perspective, the ultimate aim of the transformation is still a long way off.

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