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# Development Problems and Policies at the German Border with Poland – Regional Aspects of Trade and Investment

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# 1. Introduction

The fall of the Iron Curtain, which will ultimately result in the eastward enlargement of the EU, is very much a regional problem, as the border regions will undergo concrete changes. Trade in services or other goods consumed close to the location of production and daily commuting to the workplace, educational institutions and shopping facilities are all examples of economic activities that will influence growth in the border regions. Regional decision-makers and institutions responsible for economic and regional policy are waiting for a response to the question whether the changes to Europe's eastern borders will have a positive or negative effect on economic growth in the border regions. If negative effects predominate and the border regions turn out to be the losers in a game with many winners,[1] the capacity for compensation measures and the form these should take will have to be discussed.

This paper will explore the significance of a national border for two determinants of regional economic growth, namely foreign trade demand and investment activity. In this respect, the specific effects of borders on growth in the border regions will firstly be discussed within the framework of neo-classical growth theory and trade theories. Next, the consequences of the gradual removal of the border on export and investment activities in the German border areas with Poland will be analysed. These regions are part of the East German Objective-1 area which receives support from the EU Structural Funds and they are in particular need of economic development. Following the empirical analysis, regional policy strategies for border regions will be discussed and there will be a critical assessment of the German and European regional policy which is being implemented. The border naturally affects the economic growth of border regions in many further areas such as the regulation of the cross-border mobility of workers, the extension and improvement of infrastructure, or technology transfer across the border. These topics are not included here but will be explored in a follow-up study.

The scope of the present study does not allow the empirical investigation to examine the regions on both sides of the German-Polish border, as desirable as this would be. The focus here is therefore on the German side of the border and the Polish side is only included where it would seem necessary to explain or assess the procedures in the German border areas. The German regions along the border will however be compared with each other. In the process, it will be possible to ascertain if and how the border affects economic development in the border regions. In addition, regional features can be taken into consideration and specific regional weaknesses established. Available statistical data and the results of interviews conducted with decision-makers and administrative personnel in the border regions in autumn 1998 will be used for this purpose.

As East Germany's economic transformation from a socialist command economy to a market economy is not yet over, the particularities of the transformation process have to be borne in mind when interpreting the empirical information. One must also be aware that the regional policy measures implemented in the border regions are not primarily geared towards supporting border regions alone but are rather part of the regional policy for East German development and change as a whole.

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1 This is a widespread fear of regional decision-makers in particular and used to support their basic argument for more thorough economic assistance, documented for example in a list of requirements from the German and Austrian Chambers of Handicrafts and Chambers of Trade and Commerce located at the borders with the Central European accession countries, published in October 1998.

# 2. Trade and investment in border regions in general and in the German-Polish border regions in particular

State borders delimit the territory within which the political authorities of a country assert their claim to lead and control society. This claim can differ in scale and intensity. Consequently, when analysing the effects of state borders on border regions, the type of border must be taken into consideration. Looking at the effects of borders, Ratti (1993, 247 and 1995, 353) for example draws a distinction between borders as barriers, borders as filters and open borders. Martinez (1994, 2 ff.) does not categorise the borders themselves but the adjacent regions. He distinguishes between alienated, co-existent, interdependent, and integrated border regions. Of course, there are almost as many categories as there are borders and border regions, as each shows some peculiarities. The extremes are however relatively unambiguous: a totally closed political border prevents any exchange between the neighbouring areas whereas an open border does not obstruct this at all.

The German-Polish border cannot be classed with either extreme. After having been closed for many years (see Schultz 1996, 80-88), the border regime has been liberalised successively during the 1990s. It is still not entirely open, however, and contains many barriers against the free movement of goods and production factors. These barriers have been gradually lifted by means of bilateral and multilateral treaties since about 1991. The German-Polish border will thus hereafter be referred to as an opening border, to show that it has reached a certain degree of openness, but that the process of opening is not yet complete. The liberalisation of cross-border trade was initiated with an agreement to set up a Free Trade Zone between the EU and Poland in 1991. This should lead to the complete removal of import duties on manufacturing products by 2002.[2] As early as 1988/89, the Polish government allowed direct investment with a 100 percent capital share of the foreign investor and the transfer of profits, and it further liberalised this in the years that followed. The possibilities for Polish businesses to invest abroad were increased during negotiations on Poland's accession to the OECD in 1996. How does the liberalisation of the border regime influence trade and investment – and through these economic growth – in the regions along the German-Polish border?

## *2.1. Trade and growth in border regions*

### 2.1.1. Trade and growth in border regions – what regional economic theory tells us

The effects of a (closed) border on the sales of businesses from the border region were among the first economic effects of borders dealt with in regional economic theory. Christaller (1968, 51), Lösch (1962, 141 f.), and Giersch (1949/50, 89) use similar arguments to describe border regions as disadvantaged areas. Based on the assumption of an optimal hexagonal sales area around the location of an enterprise, they infer that a closed border prevents or hinders a company's sales in the cross-border part of this optimal sales area, and thereby reduces them. In other words, the border reduces the total demand for goods produced in the border region. Businesses cannot compensate for this by enlarging their sales area further inland, as higher transport costs and a lack of economies of scale mean that they are at a disadvantage to their domestic competitors. If the economies of scale of the domestic companies exceed the additional transport costs for supplying the markets of the

[2] The agreement does not contain a fixed timetable with regard to trade restrictions on agricultural products and services. Negotiations on the removal of these restrictions are continuing in the Association Council, a group made up of representatives from Poland and the EU which is working on the further liberalisation of relations.

border region, they might even displace businesses in the border region and enlarge their own sales areas (Lösch 1962, 144).

One consequence of the abolition of physical and institutional barriers after the opening up of a border is an increase in trade among the affected regions. Trade theory models list three determinants of trade volume (Rauch 1991, Krugman and Venables 1990). The extent of a region's *comparative advantages*, determined by its factor content and factor productivity, and the *economies of scale* that had existed since the era of the closed border and which lower average production costs both increase trade volume, whereas the third determinant, *trade costs*, lower it. Moreover, in a free trade environment, trade theory predicts a specialisation of trade and production according to comparative advantages which leads to welfare gains for all trading regions. The distribution of these welfare gains depends on the balance of effects on output, income, and substitution effects resulting from the new trade relations.

Border regions are particularly affected by such trade enlargement. Producers in border regions should have trade cost advantages over domestic producers trading with the neighbouring country.[3] These lower trade costs include transport and information procurement, as border region businesses know more about businesses, consumers and markets in the neighbouring country, and more people speak the language spoken across the border.[4] Moreover, proximity as well as existing trade relations can lead to additional knowledge on overcoming the border barriers and reducing risks in cross-border trade. This knowledge can be seen as a local benefit for managing cross-border flows originating from the concentration of foreign trade related economic activities, and further strengthening this concentration. However, location theory also cites microeconomic arguments to support a specific *dis*advantage of border regions in cross-border trade. If the businesses of a border area are smaller than those further inland, e.g. due to the restricted sales area during the period of a closed border, the border area is more affected by the difficulties which small and medium-sized enterprises have to conquer when expanding foreign trade such as limited management capacity and the difficulty in furnishing security (Habuda et al. 1998, 13-14).

Finding a negative correlation between distance and trade volume, empirical analyses prove that opening borders change sales from border regions more than those from domestic regions; for example in the case of the Canadian provinces and US-American states in McCallum (1995)[5] or the OECD-countries in Bröcker (1988) and Schumacher (1997).[6] With regard to the East German border regions, findings only exist for Saxony, where the growth of exports to Poland, the Czech Republic and Hungary clearly exceeds the growth of total exports (Eli 1997, 14 f.). The significance of these countries for Saxony's exports is also higher than for Germany as a whole. Recent research on the German-Polish border nevertheless shows the local cross-border activities of businesses to be rather low (see Krätke 1998; Sander and Schmidt 1998, Barjak 1997).

Estimations and simulations of the growth effects of rising trade between developed European regions and transformation or developing economies do not find lower growth in the developed

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3 Ratti (1995, 355-356) refers to these advantages as a position rent that producers in the border regions earn due to their proximity to the neighbouring country. Like von Thünen's position rent, this position rent depends on the distance between the place of production and the market.

4 These effects of spatial proximity are manifested in a smaller 'cognitive distance' in microeconomic terms (see Van Houtum 1997, 71-77) and as a smaller 'cultural distance' in terms of macroeconomics.

5 In addition, the Canadian-American border reduced trade to one twentieth, compared to trade among Canadian provinces under similar conditions (McCallum 1995, 616).

6 The estimations also establish that lower communication costs – indicators are a common language and a former colonial relationship – lead to more intensive trade relations (see Schumacher 1997, 336-337).

economies (Bröcker and Jäger-Roschko 1996, Lücke 1997). There are no regional analyses for the German border areas. For the US border regions, positive feed-back can be ascertained for increasing economic inter-relations and growth in Mexico (Hanson 1996, 948, Patrick 1990 following Sander and Schmidt 1998, 450).

To sum up, trade and location theories merely justify the assumption that border regions are more intensely connected to the neighbouring country by imports and exports than domestic regions.[7] These theories also allow the conclusion that there are more links if comparative advantages and economies of scale are high and trade costs low. It is uncertain from the theoretical premises which region profits more from an increase in trade. Empirical studies however show positive effects for all the regions adjacent to a border.

### 2.1.2 Sales, trade and growth in the regions at the German-Polish border

The supposed trade increase at the opening border between Germany and Poland can only be partially explored, as trade data does not exist at regional level. The export rates of the regional manufacturing sector can be used instead.[8] In this respect, it is assumed that regions with high manufacturing export rates also have a high flow of goods to Poland. This assumption is on the one hand partially plausible, as gravitation models confirm a decrease in trade connections with increasing distance. On the other hand, export rates only depend on a few firms at such a small spatial level. Their trade relations might be largely independent of distance but dependent on special features, for example in branch plants the trade relations of the mother company. The following interpretations can therefore constitute no more than an initial, descriptive overview of the effects of an opening border on local companies' sales. Further research with better data will be necessary.

In 1996 and 1997, export rates in the majority of the border regions were lower than in East Germany as a whole (see Table 1). The regions in the north (Vorpommern and Uckermark-Barnim) export very little. In the Oderland-Spree region, the high export rate is attributable to one single county: if the other counties were included the export rate would be much lower. Only in the Oberlausitz-Niederschlesien region are there some counties with above average export rates. This is also the only region where both export rates and total sales increased in virtually all counties between 1991 and 1997. The export rate in Lausitz-Spreewald has also risen, but development is rather heterogeneous within the region. Moreover, it has only been in the last few years that higher export rates have not been caused by a reduction in total sales from this region (such as in the Spree-Neiße county since 1995).

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7 This does not contradict the hypothesis that between the domestic and border regions of a single country the networks are more dense than between the border regions of two adjacent countries, as put forth by Rietveld (1993, 49-52).

8 There is no differentiated regional data on imports either.

Table 1:
Export rates and sales in mining and manufacturing

| | Export rate[a] (percent) | | | Mining and manufacturing sales in 1,000 DM | | | BAB1[b] | BAB2[c] |
|---|---|---|---|---|---|---|---|---|
| | 1991 | 1996 | 1997 | 1991 | 1996 | 1997 | | 1995 |
| **Vorpommern** | **.** | **2.6** | **1.3** | **1,769,597** | **2,300,638** | **2,371,855** | **0** | **.** |
| Greifswald, city | . | . | . | 202,925 | 359,123 | 506,400 | 0 | 89 |
| Ostvorpommern | . | 2.3 | . | 263,417 | 644,344 | 745,180 | 0 | 90 |
| Uecker-Randow | . | 3.9 | 1.1 | 366,074 | 213,325 | 184,520 | 0 | 32 |
| Stralsund, city | . | 0.2 | . | 521,428 | 546,263 | 396,619 | 0 | 66 |
| Nordvorpommern | . | 6.2 | 1.4 | 265,855 | 294,317 | 270,957 | 0 | 62 |
| Rügen | . | 3.4 | . | 149,898 | 243,266 | 268,179 | 0 | 103 |
| **Uckermark-Barnim** | **9.2** | **6.0** | **6.0** | **3,048,814** | **4,912,934** | **5,439,047** | **1** | **.** |
| Barnim | 7.9 | 10.8 | 10.7 | 780,697 | 843,848 | 881,413 | 1 | 7 |
| Uckermark | 9.7 | 5.0 | 5.1 | 2,268,117 | 4,069,086 | 4,557,634 | 1 | 16 |
| **Oderland-Spree** | **21.9** | **20.1** | **25.6** | **2,360,948** | **3,760,757** | **3,945,119** | **1** | **.** |
| Frankfurt (Oder), city | . | . | . | 235,344 | 303,386 | 282,285 | 1 | 3 |
| Märkisch-Oderland | 4.9 | 1.2 | . | 389,109 | 753,647 | 825,920 | 0 | 19 |
| Oder-Spree | 25.8 | 25.4 | 25.6 | 1,736,495 | 2,703,724 | 2,836,914 | 1 | 11 |
| **Lausitz-Spreewald** | **4.4** | **5.4** | **8.4** | **8,386,930** | **6,805,399** | **7,520,406** | **1** | **.** |
| Cottbus, city | 0.8 | 5.3 | 6.9 | 1,621,690 | 683,459 | 772,392 | 1 | 3 |
| Spree-Neiße | 1.9 | 8.5 | 15.3 | 3,573,103 | 2,318,114 | 2,546,407 | 1 | 15 |
| Oberspreewald-Lausitz | 7.5 | 0.5 | 1.5 | 2,048,838 | 1,654,603 | 1,656,227 | 0 | 4 |
| Dahme-Spreewald | . | 6.5 | 7.4 | 469,347 | 971,460 | 1,101,690 | 1 | 10 |
| Elbe-Elster | 16.6 | 5.2 | 5.6 | 673,952 | 1,177,763 | 1,443,690 | 0 | 32 |
| **Oberlausitz-Niederschlesien** | **10.5** | **10.8** | **11.8** | **2,765,264** | **7,238,311** | **7,620,761** | **0** | **.** |
| Görlitz, city | . | 3.0 | 5.6 | . | 452,216 | 541,214 | 0 | 44 |
| Niederschl. Oberlausitzkreis | 11.5 | 28.1 | 25.7 | 475,035 | 714,834 | 739,993 | 0 | 29 |
| Löbau-Zittau | 12.0 | 13.3 | 14.7 | 600,562 | 896,324 | 953,277 | 0 | 40 |
| Bautzen | 11.4 | 19.1 | 20.9 | 1,011,240 | 1,537,163 | 1,531,336 | 0 | 7 |
| Hoyerswerda, city | . | 0.2 | 0.2 | . | 1,176,149 | 907,623 | 0 | 27 |
| Kamenz | 7.2 | 6.3 | 7.3 | 678,427 | 2,461,625 | 2,947,318 | 0 | 6 |
| ***New Länder (excluding Berlin)*** | ***14.9*** | ***12.1*** | ***14.5*** | ***88,601,379*** | ***126,158,290*** | ***138,671,304*** | **.** | **.** |

a Export rate: Ratio of foreign sales to total sales in firms with 20 or more employees in the mining and manufacturing sectors. Areas marked with a dot indicate that no data was published: these areas were therefore not included in the calculation of regional export rates.
b BAB1 = 1: Majority of the county had motorway access to Poland in 1996/97 (IWH classification).
c BAB2: Travel time to the next motorway entrance in minutes (1995); mean values of 5 to 15 measuring points per county, calculated by the University of Kassel.
Source: IWH calculations based on data from the statistical offices of the *Länder*; University of Kassel.

According to new trade theory, economies of scale mean that the export volume of a region *after* integration should depend on the market size *before* the opening up of the border. For this reason, Table 1 shows the total sales in mining and manufacturing in 1991. A visual comparison between those counties with high and those counties with low sales alone reveals that the export rates in 1996/97 do not show a positive correlation with market size.[9] To understand this, one should bear in mind that the trade regime between Germany (or rather the EU) and Poland was still being liberalised in 1996 and 1997. The export rates for both years are then certainly not representative of integrated economies. Secondly, sales in the East German mining and manufacturing sectors in 1991 were

9 Some multiple correlation analyses were also undertaken but did not find any correlation either. The results are not shown or discussed here owing to the small sample size.

largely influenced by the bygone GDR central planning system and special conditions for trade with eastern Europe. Thirdly, total export rates and sales can only be considered as rough indicators. Industry-specific data which could take into consideration economies of scale in the production process does not exist at regional level.

The significance of transport costs (representative of trade costs) was explored for regional exports at the border with Poland using two indicators; one representing the time-distance from the counties at the border to the Polish markets by road (BAB1), the other the accessibility of the counties within the inter-regional road system in general (BAB2). Both indicators show no correlation with the export rates (either in Table 1 or a multiple correlation analysis that will not be elaborated further in this paper).[10] On the one hand this can be attributed to a lack of correspondence between the indicators. The export rate comprises manufacturing businesses' exports to sales markets world-wide, the accessibility indicators only measure integration within the national road system. On the other hand, the long waits at the border crossings with the Central European neighbour countries have lowered the relative importance of accessibility advantages.

"Old" and "new" trade theories predict a specialisation of the industry pattern of trade and production in accordance with the comparative advantages of the trading regions. Consequently, specialisation should have risen in the border regions in the period after the border was opened, and the winners should be those industries with comparative advantages. Coefficients of specialisation compare the industrial structure of sub-regions with that of the macro-region to which they belong (for details of the calculation, see appendix). The closer the coefficient is to 1, the more specialised a sub-region is. The coefficients of specialisation of the border regions have changed little between 1994 and 1997, except in the northernmost region of Vorpommern (see Table 2) where the coefficient has not increased but decreased, along with the export rate (see Table 1). This could be due on the one hand to declining industries that used to be major regional producers and exporters (e.g. ship-building). On the other hand, it could be due to a growth of industries that (still) sell mainly on the national markets. Both explanations can be put down to a process of structural change which has altered the specialisation of Vorpommern from historical, partly centrally planned patterns to new patterns determined by regional factor content and productivity.

Table 2:
Coefficients of specialisation in spatial planning areas along the border[a]

| | 1994[b] | 1995 | 1996 | 1997 |
|---|---|---|---|---|
| Vorpommern | 0.39 | 0.33 | 0.33 | 0.30 |
| Uckermark-Barnim | 0.30 | 0.30 | 0.28 | 0.30 |
| Oderland-Spree | 0.27 | 0.24 | 0.25 | 0.27 |
| Lausitz-Spreewald | 0.16 | 0.16 | 0.15 | 0.16 |
| Oberlausitz-Niederschlesien | – | 0.21 | 0.21 | 0.20 |

a Calculated on the basis of industry data for employees eligible for social security payments; on details of the calculation see appendix. No data available before 1994.
b No data for the Dresden district.
Source: IWH calculation based on data from the Federal Employment Office.

This process of structural change has been part of the economic transformation in all East German regions since the opening up of the border in 1990. However, its extent differs among the regions and depends on the degree of structural distortion of the regional economy. The more distorted the

10 It should be noted that travel distances to the next motorway are very high in the north and in some counties in the south. This indicates shortfalls with regard to access, the effects of which cannot however be established by looking at export rates.

regional economy is – that means the less its structures correspond to the ones generated in a market economy – the smaller are the chances for exporting successfully. The degree of distortion of the regional economy cannot be measured directly, as comparative advantages as well as factor content and factor productivity of a region are virtually impossible to measure.[11] A fairly simple measure for the amount of structural change can be formulated by adding up the absolute deviation of an industry's shares at two points in time. On the basis of the data available this measure can be calculated for the structural changes between 1994 and 1997.

- Vorpommern attained the highest cumulative change (26.8). There was intensive structural change, leading to a decrease in the degree of specialisation of this region. This obviously points to distorted structures in 1994. Ship-building activities were particularly dominant in the region. The docks have locational advantages as they are located at the coastline and have a long industrial tradition in Vorpommern, but competition is high due to over-capacity on the world market.
- Lower figures were recorded for Uckermark-Barnim (12.5) and Oderland-Spree (13.7). In view of the fairly high and basically constant specialisation coefficients of these regions, two competing conclusions can be drawn: either that in 1994 they already showed a pattern of specialisation sustainable under market conditions, or that the intensity of structural change has been lowered by public intervention in the market process. As the employment shares of the most important regional industries have decreased (Uckermark-Barnim: oil industry, Oderland-Spree: metal production), and export shares have only partially increased (see Table 1), the second conclusion seems to be more plausible.
- With an index of 17.3, the Lausitz-Spreewald region is in the middle with regard to the amount of structural change. Changes occurred especially in chemical production and mechanical engineering (lower employment shares) as well as textiles, plastics, and metalworking (higher employment shares). More recently, these have been accompanied by rising exports.
- The lowest figure is to be found in Oberlausitz-Niederschlesien (12.0), where it was however only possible to compare 1997 with 1995. Integrating the relatively low coefficient of specialisation and the average export rates into a regional profile, one can conclude that the region has a diversified industry structure, increasing its exports without any significant specialisation. Some sort of specialisation can be seen in the leather, textiles and clothing industries which employ 10 percent of the labour force compared to only 3.9 percent in East Germany as a whole. This regional focus on fairly labour intensive industries nevertheless seems to be sustainable, though wages are much lower in neighbouring Poland and the Czech Republic.[12]

The comparably low export rates in the border regions cannot be explained by a lack of economies of scale or unfavourable access, and therefore high trade costs, on the basis of the available data. The specialisation pattern that had developed historically has contributed greatly to the fact that some regions have witnessed higher and others lower export gains. Particularly in Vorpommern, to a smaller extent also in Uckermark-Barnim and Oderland-Spree, former industrial strongholds have

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11 For measurements such as the RCA-index (Revealed Comparative Advantage) that rely on a comparison of import and export shares of an industry with import and export shares of the entire economy the required data is again lacking at regional level.

12 The clothing industry increased its regional significance between 1994 and 1997 (from 1.8 % to 3.4 % of the regional workforce) but textiles and leather lost out in the same period (textiles: -1.3 %, leather: -0.3 %, calculated with data from the Federal Employment Office).

been torn down and not yet replaced by a new industrial system. In the Lausitz region (Saxony and Brandenburg parts), the degree of specialisation was low. Some existing industrial sites could retain or even increase their significance, whilst total manufacturing exports rose at the same time.

## *2.2 Investment and growth in border regions*

### 2.2.1 Investment and growth in border regions according to regional economic theory

Location at a *closed border* has an effect on the private real capital stock of a region. There are fewer businesses, and these have a lower volume of production than in domestic regions. This is due to limited sales areas (restricted in one direction by the border and in the other by transport costs, see page 3), and lower labour market capacity.[13] Border regions are less attractive investment locations than other regions because of these locational disadvantages.

Regional theories repeatedly assume that *following the opening up of a border*, capital *inflow into* border regions is the norm, and that the opening up of the border has a positive influence on regional development by virtue of higher capital spending (Giersch 1949/50, Rauch 1991). However, the microeconomic foundations for this supposition are contradictory, and there are arguments both for higher and lower investment activity after the opening up of a border.

a) Firstly, capital spending may rise due to an increase in sales of the regional businesses. As mentioned, the opposite could also occur, that is a decrease in capital spending due to lower production caused by rising imports (see page 4).

b) Secondly, a reduction of border-related barriers improves the quality of the border regions as investment locations and increases the preference to settle there. Locational disadvantages, such as limited sales areas, fewer qualified workers, and wider infrastructure networks, are reduced. But this only happens slowly after the opening up of a border. Moreover, the preferences for certain locations and neglect of others established during the regime of the closed border may persist and only suddenly change after some critical values are attained.[14]

c) Thirdly, investment can be lower in a border region after the border has been opened up if capital is exported. Due to the smaller spatial distances, transaction costs for foreign direct investment in the neighbouring country may be lower for businesses in the border regions.[15] As lower costs enable small and medium-sized enterprises to invest abroad – which they might not be able to do efficiently from a domestic location – *higher* capital exports to the exterior may arise. The lower transaction costs can also theoretically cause *lower* outflows of capital from the border areas than from other regions within a country, as other forms of co-operation are also easier (such as simple supplier contracts, processing work under contract, or networks). Therefore, one can only assume that firms on both sides of the border are more involved in cross-border co-operation (see page 4).

The empirical results on capital spending in the East German border regions in Barjak (1997, 58) do not confirm the hypothesis that these regions have become preferred territories for private investment since the border has been opened up. Neither in the German regions at the Polish border, nor in those at the Czech border did investment exceed the East German average between 1990 and 1995.

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13 Economic and socio-cultural factors lead to population losses in regions at closed borders.

14 As described by Krugman (1991, 26-29).

15 For example, costs for finding an investment object or location, for comparing the profitability of different alternatives, or for co-ordinating and controlling the production facilities set up.

There were naturally many barriers to the mobility of goods and production factors at both borders. However, the manufacturing sector also spent relatively small amounts of capital in the area around Berlin and along the former internal German border, where virtually no institutional barriers to mobility remain.

When a border is opened, the sales volume of an enterprise, the evaluation of the border regions as investment locations, and the possibility for cross-border capital-flows all change. There is no one answer to the question whether this results in more or less capital spending in the border regions. According to the law of diminishing returns, increased investment should - all things being equal - cause higher growth effects in the border regions than in domestic regions.

### 2.2.2. Investment at the German-Polish border

The empirical analysis of investment had to be restricted to the mining and manufacturing sectors owing to the lack of data on other branches of economic activity. The question can be examined as to whether mining and manufacturing have experienced high - and in the course of the gradual removal of the border, increasing - capital expenditure.

There is a broad variety of investment per capita in the counties and cities in the border area (see Table 3). In some cases (Uckermark, Oder-Spree, Spree-Neiße and Oberspreewald-Lausitz counties) more than twice the East German average was invested. These counties, as well as those with high capital expenditure in Vorpommern and Oberlausitz, are locations of large-scale businesses (so called *"industrial core areas"*) where extensive re-structuring measures have been undertaken. These measures have been very capital-intensive, as the ratio of investment to employees reveals. After their completion, investment is reduced in the industrial core areas, as the examples of Ostvorpommern (shipbuilding) and Oberspreewald-Lausitz (chemicals, power plants) make clear. Due to the great variance of data on capital spending, the counties with industrial core areas can hardly be considered representative for the border regions. Of the 14 counties and urban municipalities with capital spending below the East German average, 11 do not reach 75 percent and 8 not even 50 percent of the East German figure. Investment was particularly low in the sparsely industrialised north (Vorpommern) and in the urban municipalities. The regions at the Polish border have not yet become a preferred location for investment in East Germany. As argued before, this could be due to a worsening economical situation and capacity utilisation as a consequence of rising imports, capital-outflows into the neighbouring country, or a persistence of locational disadvantages.

The sales figures from Table 1 (see page 6) can also be used to indicate the capacity utilisation and income situation. They make it clear that the development of sales was generally positive in the border regions from 1991 to 1997, except for some counties in Vorpommern and Lausitz-Spreewald. The counties with little or no sales growth are also those with low investment per employee and per capita.[16] It is then probable that investment and sales are interdependent in the border regions. The results do not however indicate any reasons for the slump in sales and low profitability in some counties, e.g. whether these are caused by imports from Poland, or by economic transformation accompanied by far-reaching structural changes alone.

With regard to cross-border capital-flows, interview partners in all regions at the German-Polish border stated that out-migration of entire businesses has rarely happened. In some cases, labour-intensive activities have been moved to Poland.

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16 This result is confirmed with great stability in cross-section regressions, whereby the development of sales from 1991 to 1997 as well as the volume of sales for 1991 on the average investment in the period 1992 to 1997 were estimated (both per capita and per employee) for 20 counties along the border.

Table 3:
Investment in mining and manufacturing in the regions at the border to Poland[ad]

| | Investment in mining and manufacturing in DM per capita | | | | | | | Investment in DM per employee |
|---|---|---|---|---|---|---|---|---|
| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | Average 1992-97 | Average 1992-97 |
| **Vorpommern** | **470** | **647** | **768** | **1,029** | **232**[c] | **160**[c] | **551** | **21,803** |
| Greifswald, city | 252 | 424 | 279 | 134 | 93 | 154 | 223 | 6,888 |
| Ostvorpommern | 513 | 1,508 | 2,113 | 2,559 | 461 | 150 | 1,217 | 53,627 |
| Uecker-Randow | 406 | 272 | 197 | 157 | 169 | 229 | 238 | 10,803 |
| Stralsund, city | 529 | 434 | 1,397 | 2,541 | . | . | 1,225 | 22,943 |
| Nordvorpommern | 805 | 649 | 168 | 268 | 131 | 105 | 354 | 18,955 |
| Rügen | 124 | 196 | 209 | 352 | 222 | 185 | 215 | 16,095 |
| **Uckermark-Barnim** | **828** | **2,042** | **1,901** | **1,496** | **1,206** | **1,709** | **1,530** | **43,987** |
| Barnim | 624 | 471 | 526 | 487 | 249 | 300 | 443 | 12,458 |
| Uckermark | 1,011 | 3,461 | 3,160 | 2,440 | 2,120 | 3,104 | 2,550 | 71,358 |
| **Oderland-Spree** | **548** | **1,045** | **1,139** | **1,077** | **1,837** | **1,732** | **1,230** | **41,953** |
| Frankfurt(Oder), city | 459 | 676 | 1,269 | 448 | 90 | 64 | 501 | 20,620 |
| Märkisch-Oderland | 332 | 1.071 | 1,204 | 835 | 450 | 327 | 703 | 42,110 |
| Oder-Spree | 785 | 1,187 | 1,023 | 1,567 | 3,826 | 3,691 | 2,013 | 47,080 |
| **Lausitz-Spreewald** | **1,478** | **1,592** | **1,331** | **1,356** | **1,151** | **1,044** | **1,326** | **21,522** |
| Cottbus, city | 990 | 250 | 267 | 526 | 316 | 244 | 432 | 11,190 |
| Spree-Neiße | 1,589 | 2,598 | 2,290 | 2,775 | 2,636 | 2,517 | 2,401 | 24,866 |
| Oberspreewald-Lausitz | 2,501 | 3,043 | 2,578 | 1,622 | 1,294 | 1,260 | 2,050 | 25,089 |
| Dahme-Spreewald | 882 | 742 | 426 | 541 | 445 | 397 | 572 | 20,092 |
| Elbe-Elster | 1,232 | 933 | 748 | 1,077 | 824 | 536 | 892 | 21,742 |
| **Oberlausitz-Niederschlesien** | **.** | **.** | **731** | **852** | **980** | **856** | **855** | **18,492** |
| Görlitz, city | . | . | 534 | 731 | 1,683 | 655 | 901 | 16,448 |
| Niederschl. Oberlausitzkreis | . | . | 509 | 293 | 834 | 608 | 561 | 15,850 |
| Löbau-Zittau | . | . | 407 | 425 | 444 | 729 | 501 | 14,016 |
| Bautzen | . | . | 863 | 496 | 951 | 825 | 784 | 16,234 |
| Hoyerswerda, city | . | . | 533 | 2,187 | 897 | 2,139 | 1,439 | 21,043 |
| Kamenz | . | . | 1,254 | 1,593 | 1,398 | 821 | 1,266 | 26,536 |
| ***New Länder as a whole (excluding Berlin)*** | ***959*** | ***1,069*** | ***1,002*** | ***q1,003*** | ***1,072*** | ***1,026*** | ***1,022*** | ***23,477*** |

a The average yearly population figures for the counties constituted the base for the calculations. If not published by the statistical offices, a mean value was calculated by the IWH.
b Average for Stralsund 1992-1995, Oberlausitz-Niederschlesien: 1994-1997
c Without Stralsund.
d Only firms with 20 and more employees, as included in the statistical offices' registration schemes.
Source: Statistical offices of the new German *Länder*, IWH calculations.

Comparing investment on the German and Polish sides of the border makes it possible to establish whether the opening up of the border and the integration process so far has had differing effects, for example with respect to locational quality. In the course of time, investment per capita, standardised with the national value to take inflation rates into account, has gone up in three German regions and down in the other two (see Figure 1). In view of the fact that in Oderland-Spree and Uckermark-Barnim part of the investment took place in large-scale industrial core plants, in only one region, Oberlausitz-Niederschlesien, has investment increased as the border barriers were reduced. Of course, investment in East Germany is not only determined by locational characteristics and the regional position in terms of locational competition (for investment), but also by the extensive economic support from federal and *Land* agents (see section 3.2). As the border regions have also

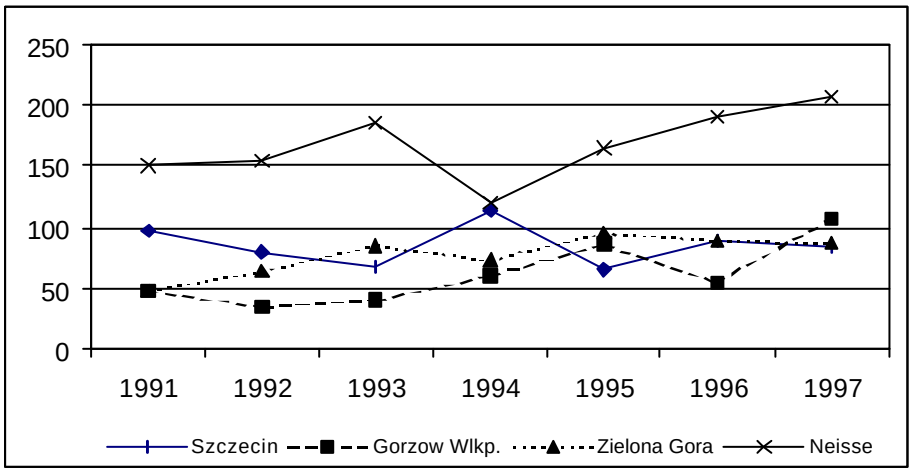
benefited from this economic promotion, the decrease in the standardised capital spending ratio (compared to East Germany as a whole) points to a change for the worse in terms of the competitive position with respect to locational competition. By contrast, on the Polish side three out of four regions have increased their share of total national investment in the manufacturing sector (see Figure 2). They have consequently benefited more from the opening of the border and improved their position in inter-regional competition for investment.

Figure 1:
Per capita investment in manufacturing in the German spatial planning regions at the border
- in percent of the East German value -

**Error! Bookmark not defined.**

Source: Statistical offices of the new German *Länder*, IWH calculations.

Figure 2:
Per capita investment in manufacturing in the Polish voivodships along the border [a]
- in percent of the national value for Poland -




a Voivodships of Jelenia Gora and Legnica added to "Neisse".
Source: Polish statistical office (GUS), IWH calculations.

This result hints at the significance of locational disadvantages in the German regions at the Polish border. Because of a lack of statistical data it is difficult to gain a direct and unbiased measurement of locational quality. Filling the data gap with a firm survey is costly and time-consuming. Instead, interviews were conducted with decision-makers and administrative personnel in the regions and

grey literature explored in order to assess the current state of knowledge on locational quality. The main results for the most important location factors are outlined below:[17]

*Distance from (potential) markets:* With respect to this factor, the regions bordering on Berlin and to Poland, i.e. Uckermark-Barnim, Oderland-Spree and Lausitz-Spreewald, show differences at micro-level. The interviewees pointed to a East-West gap, with a relatively good economic situation in the communities close to Berlin (for example with respect to business location choices). This effect of the German capital is most marked in the areas with major road connections. Commuter networks, especially to work in Berlin or in the opposite direction to visit recreation and tourism facilities in East Brandenburg, have a broader spatial reach. The differences are less marked in Vorpommern where the coastal area constitutes a major point of attraction for tourism, and in the Oberlausitz region where the A4 motorway from Dresden to Goerlitz functions as a development axis. Some businesses from more remote regions have moved closer to this axis.

According to our interview partners, proximity to Poland has barely any positive effects on investment activity, as sales and supplies have only expanded to Polish markets to a small extent and there are no cross-border spillover effects.[18] Only in parts of the southernmost region of Oberlausitz-Niederschlesien have more intensive cross-border economic ties developed.[19] Various reasons were cited as responsible for the low interest of non-resident investors in the border regions, for instance the peripheral location within Germany, the low competitiveness of many location factors compared to Poland, and the negative regional image.

*Labour force supply:* One problem cited was the out-migration of qualified workers in virtually all border regions where large-scale production sites were closed down or radically downsized after German unification. Qualified labour has been lost in this way throughout East Germany. Labour market potential could be saved in investment that linked up with the existing industry structure, such as steel in Oder-Spree county, tourism in Vorpommern and textiles and clothing in Ober- and Niederlausitz. The aforementioned commuters to Berlin may lower pressure on the local labour market, but they only exist to a partial extent as a hidden reserve for the settlement of new businesses in the border regions.[20] Additionally, job changes, long-term unemployment and a lack of opportunities for "learning-by-doing" have reduced the stock of qualified labour. Successful re-qualification and re-training measures were given particular mention in the service sector (e.g. for call centres, teleworking, logistics and marketing). Compensating for lacking qualifications by employing workers from the other side of the border is only marginally important in this respect, for instance with German managers in Poland, or Polish restoration workers and carpenters in Germany.

*Road infrastructure:* Table 1 (see page 6) shows fairly insufficient road network access to the northern and parts of the southern border regions. This was confirmed in the regional interviews,

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17 They have proved to be important in various analyses on location evaluation conducted among East German firms, see e.g. Brenke (1996, 240) and Grabow, Henckel, Hollbach-Grömig (1995, 328).

18 This opinion is not unrivalled, and it might also be changing. When establishing special economic zones, the Polish government also set up a zone in Kostrzyn/Slubice very close to the border. Local agents and personnel assigned to the economic promotion of the neighbouring German border region consider co-operation with this zone as a possible nucleus for intensifying cross-border economic relationships (see section 3.3).

19 In the Löbau-Zittau county, intensive relationships to Polish and Czech businesses, located to the south of this county, were mentioned. The interviewees estimated that 60 percent of the local firms and virtually all big firms have economic ties across the borders.

20 Cross-border commuting to and from Poland is still the exception rather than the rule.

which also uncovered dissatisfaction with the road infrastructure in most of the regions.[21] In the north and the south of the border area the road connections in all directions were deemed insufficient. In the Berlin catchment area, the bad condition and overloading of East-West connections, including the border-crossings, constitute bottle-necks. Not only the situation on the German side of the border but also the lack of integration of the main connections into the Polish road network are frequent problems. The interviewees complain that the removal of these bottlenecks is regarded as a low priority in Poland. Within the regions, the low standard of cross-town links, by-passes and motorway feeder roads reduce possible travel speeds.

To sum up, less private capital has been invested in the German regions at the Polish border than in the East German average in the manufacturing sector. This has been partially caused by reduced sales in the manufacturing businesses. It has been furthered by an accumulation of locational disadvantages in some regions (e.g. Vorpommern). The positive effects of Berlin (sales potential) certainly outweigh the negative effects (worker drain, road overloading), but their spatial reach is limited. Investment has increased especially where there is a broad supply of qualified labour (Oberlausitz). There is hardly any indication of capital exports.

# 3. Regional policy for border regions

### *3.1. Justification for and strategies of regional policy to benefit border regions*

In line with the neo-classical approach, in a market economy the market forces must ensure an optimal allocation of resources in space. Regional policy therefore requires a justification (Maier/Tödtling 1996, 170 ff.; Fürst et al., 1976 5ff.). A distinction is usually drawn between economic and compensatory reasons for regional policy measures.

What particular justification could there be for regional policy measures to benefit border regions? State borders do not just represent awkward and inconvenient barriers. They protect societies and economies from undesirable externalities. The negative effects of a border stand in the way of the positive function. These negative effects do not however concern all regions of a state to the same extent. The barrier function of the border is particularly apparent within those regions located directly at the border (see section 2.1.1.). *With closed borders*, regional policy could then be seen as compensation for the disadvantages for the border regions of a division which is otherwise useful and necessary for society as a whole. When national borders are opened up, so the barriers to the movement of persons, goods, services and capital are lifted and the disadvantages of the border location become less significant. The border may even gain a locational advantage (see page 4). In the case of *opening borders*, the argument that regional policy compensates for disadvantages therefore loses ground. Regional policy to benefit the border regions can in this case only be justified for equalising wealth differences. It can however take a very long time to remove the divisive effect of a border. The typical locational weaknesses of the border regions, that is a less well developed transport infrastructure than that inland, lower business density, a lack of innovation with regard to existing businesses and so on cannot be eliminated overnight. The persisting disadvantages of the division may then justify the compensatory payments to the border region for some time after the border has been opened up.

[21] Only in Lausitz-Spreewald and Barnim county was the road system judged to be fairly dense. Further improvement could concentrate on quality.

Justifying the financial assistance provided to border regions as compensation for disadvantages occasioned by the border does not however say anything about regional strategy. Various regional strategies will be discussed below in terms of their suitability for assisting border regions. The regional policy applied at the Polish-German border will then be considered and assessed in the light of these strategies.

*Market-oriented regional policy* is a framework regional policy. It ensures the elimination of any factors that might hinder a spatial allocation of production factors optimal for growth. This strategy is aligned to growth policy. It does not contain any particular preference for the border regions. A market-oriented regional strategy particularly eliminates obstacles to mobility, which hinder the migration of the factors capital and labour to the areas with the largest relative scarcity and the highest wages. The removal of barriers to mobility especially concerns infrastructural development and the securing of competition as well as market flexibility and information procurement on regional factor allocation and factor payments. This market-oriented regional policy strategy does not include any more extensive measures.

*Equalisation-oriented regional policy for peripheral regions* deals mainly with the specific features of economically weak regions (e.g. high unemployment, low business density, a lack of capital goods). This policy is geared towards realising an equal standard of living in the sub-regions of a country. It is often argued that this policy opens up non-exploited regional production potential and therefore contributes to total economic growth. However, in view of the lack of information on state regional policy, conflict between the aim of providing compensation and that of encouraging growth cannot be ruled out. In addition to market-oriented regional policy instruments, business subsidies are introduced to raise economic activity in the border regions above the profitability threshold. As well as business subsidies being granted, infrastructure provision in the problem regions is also often improved. Infrastructure measures are designed to create prior input to attract foreign investors as well as to strengthen the competitiveness of existing businesses.

*Border-specific regional policy* is a promotion strategy oriented to causes, which aims to remove the barrier effects of the border and strengthen the border itself as a contact area. It features both growth and compensatory elements. The removal of obstacles to mobility with regard to the cross-border movement of goods, services, capital and persons aims at promoting growth. This especially concerns the removal of physical barriers to mobility such as bottlenecks at the border crossing points, but also a change in institutional regulations which hinder cross-border mobility (such as the mutual recognition of professional qualifications by neighbouring states). These measures should in principle benefit all regions of a national economy to the same extent. Special assistance is therefore granted to businesses, employees and municipalities in the border regions as a form of compensation in addition to the above-mentioned mobility enhancing measures. These measures deal directly with obstacles to cross-border economic co-operation and help eliminate them. Such measures may, for example, comprise specific information and consultancy provision for small and medium-sized businesses with regard to investment conditions, economic and customs conditions or the organisation of events where business representatives can meet and establish opportunities for co-operation. As the intensity of cross-border economic relations also depends on socio-cultural conditions, the influence on these intangible locational factors is also one element of a border-specific regional policy (e.g. bilingual schools, joint cultural events or the promotion of tourism in the area around the border).

*Support through social transfers:* Finally, the provision of transfers for consumption purposes to the inhabitants of the border regions is also - in theory - feasible as a regional strategy, for example in

the form of unemployment benefit. This strategy would be compensatory and serve to ensure a specific per capita income in the disadvantaged border regions in accordance with distributive norms.

Each of the above-mentioned strategies have both advantages and disadvantages and it is thus extremely difficult to rank them definitively (see overview).

Overview:
Advantages and disadvantages of various regional political strategies to benefit border regions

| | Advantages | Disadvantages |
|---|---|---|
| Market-oriented regional policy | • No distortion of the spatial factor allocation<br>• Partial removal of border-related locational disadvantages | • Results are unpredictable, e.g. passive regeneration of the border regions<br>• Long-term effect |
| Compensatory regional policy | • Short-term effect | • Removal of border-related locational disadvantages is at best indirect<br>• Numerous distortions of the spatial factor allocation (windfall profit, substitution effect and reliance on subsidies, spiralling subsidies) |
| Border-specific regional policy | • Direct removal of border-specific disadvantages<br>• Little distortion of the spatial factor allocation | • Long-term effect<br>• Weak effect of assistance |
| Support through social transfers | • No distortion of the spatial factor allocation<br>• Short-term effect | • No removal of border-specific locational disadvantages |

Source: own research.

The market-oriented regional policy is preferable from the point of view of allocation effects. It does not lead to allocational distortion and is therefore optimal for growth. As the effects of this strategy are however unpredictable for the border regions and a "passive regeneration" of the border regions cannot be ruled out – a regeneration that relies on the out-migration of people to lower social and economic problems – a combination with one or several of the above-mentioned strategies seems most sensible. As they cause little or no allocative distortion, the border-specific strategy and support through social transfers could be used. The latter is effective in the short-term in terms of securing a specific level of income. However, it does not remove border-specific shortfalls in development. The border-specific strategy is in line with causes. However, it can only bring about long-term effects. To the extent to which a removal of border-related disadvantages is speeded up by the border-specific strategy, self-financing effects can also be anticipated. This may mean a quicker abolition of the regional assistance justified by the divisive effect of the border. A global compensatory strategy is less suitable for eliminating border-specific shortfalls. It only serves to alleviate the symptoms of a border location and is linked with numerous allocational distortions.

A brief overview of strategies to aid the border regions applied in practice by the EU, the German federal government and the *Länder* as well as the measures implemented to do so can be found below. This will be followed by an assessment of a "bottom up" regional policy approach as developed in the border regions.

### *3.2. Regional strategies and instruments at federal and EU level for the German-Polish border region - current situation and assessment*

### 3.2.1. Enhancing the sales of enterprises located at the German-Polish border

All of the programmes to support foreign trade generally offered to East or West German companies are available to businesses located in the regions along the Polish border. According to a data base of the Federal Ministry for Economics and Technology, the federal government alone offers 12 programmes for export assistance. These programmes support participation at trade fairs, provide financial support for export trade and foreign direct investment and cover foreign trade risks through guarantees. Federal government assistance is supplemented by various *Länder* funding programmes. Hence, in the Free State of Saxony there is a programme to refinance export credits as well as a programme to improve business performance. Brandenburg offers a programme to support trade fairs. It also offers a loan guarantee specifically for direct investment in Poland. In Mecklenburg-Vorpommern, a subsidy is available to employ a foreign trade assistant and there is also a directive on sales and export assistance. These programmes are above all aimed at overcoming shortfalls associated with company size. The measures are thus not limited to businesses in the border regions.

The provision of various types of sales-oriented financial assistance is supplemented by information and advice on foreign trade. In the framework of assistance to foreign trade, border region enterprises (as well as enterprises in other regions) have access to a wide range of organisations providing information and advice. A Federal Office of Foreign Trade Information data base mentions 95 such institutions for the three East German *Länder* bordering on Poland. These deal with foreign trade relations in general, with the Central and East European countries or specifically with Poland.[22] In Frankfurt (Oder) alone (ca. 78,000 inhabitants) six institutes offer advisory services for sales and foreign trade.[23]

To sum up, market assistance does not just benefit the border regions but all of the regions of East Germany, as weak points in terms of acquiring foreign trade partners are brought about less by geographic location than business size. It is part of an equalisation-oriented regional policy which aims to support small and medium-sized businesses. In the border regions it also however assumes the form of border-specific assistance, as in these areas a lack of information about market possibilities and conditions (in the neighbouring country) can lie at the root of market problems if one assumes that businesses in domestic regions as well as in border regions are better informed about their own country than they are about the neighbouring country.[24]

### 3.2.2. Promotion of investment in the German-Polish border regions

The *financial promotion of private capital goods investment* compensates for locational disadvantages, thereby reducing the cost of an investment project and improves its profitability. Capital goods investment in the East German regions along the Polish border is on the one hand supported by the instruments available throughout East Germany: an investment subsidy of 20% of the investment costs eligible for assistance for small and medium-sized enterprises and of 10% for other investments. This investment subsidy is granted automatically (see Heimpold 1998). Up to the

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22 Of these, 60 function on a national level (e.g. the Federal Office of Foreign Trade Information, Hermes, the German-Polish Chamber of Industry and Commerce and inter-trade organisations), 10 in the *Länder* (e.g. economic promotion organisations) and 22 at regional level (e.g. Chambers of Trade and Commerce, Chambers of Handicrafts).

23 These comprise the office of the Euroregion PRO EUROPA VIADRINA, the Chamber of Industry and Commerce, the Chamber of Handicrafts, the Business and Innovation Centre Frankfurt (Oder), the East Brandenburg Investor Centre and the World Trade Centre in Frankfurt (Oder).

24 That does not contradict the aforementioned assumption that businesses in border regions are better informed about the neighbouring country than their counterparts in domestic regions.

end of 1998, investment in businesses and housing was also funded by a system of accelerated depreciation. Moreover, small and medium-sized enterprises in East Germany, including the border regions, can benefit from low-interest loans to finance business establishment or for growth investment. Finally, there is a regional economic assistance instrument in the form of a joint programme on "Improvement of the regional economic structure" (German abbreviation: GRW). Along with the EU border-funding programme Interreg and several low-budget funding programmes at *Land* level, this is one of the few funding programmes to permit a spatial differentiation of funding to the benefit of the border regions. The programme is examined more closely below with regard to its effectiveness in the regions along the German-Polish border.

The programme on "Improvement of the regional economic structure" funds capital investment in the industrial economy as well as business-related infrastructure measures. Industrial investment is only funded if it is aimed at improving sales potential outside the region (in accordance with the export basis theory), as particularly large development impulses are thereby expected for the regional economy. The programme is co-financed to a large extent by the European Regional Development Fund (ERDF). The funding is discretionary. On account of high problem levels in East Germany as a whole, all of its regions are eligible for funding under ERDF programmes as well as that on "Improvement of the regional economic structure". However, within East Germany the rates of funding awarded for industrial development are spatially differentiated. This differentiation occurs via an indicator-based ranking of the East German labour market regions. For the period 1997 to 1999, this ranking placed all labour market regions along the German-Polish border into the highest funding priority group. In these regions, industrial investment can be funded to a maximum of 35% of the investment costs (in small and medium-sized enterprises up to 50%). In the remaining regions, the maximum funding amount is around 7% lower, that is 28% and 43% respectively. To a certain extent, those *Länder* bordering on Poland further strengthen these preferences towards the border regions. In the period 2000 to 2003, the East German regions along the Polish border will continue to be supported with the highest possible level of funding in the framework of the GRW-programme (BBR 1999, 4 f.). Yet this also implies that the situation in the regions along the German-Polish border has not seen any significant improvement when measured by the indicators on which funding eligibility is based (under-employment, level of income and infrastructure provision).

With regard to the *spatial distribution* of the funding for this programme, in the period 1990-1998 there was a total inflow of DM 7.6 bn of subsidies for business investment into the border regions. In terms of assistance awarded for industrial investment projects in relation to the population, the border regions were thereby slightly behind the East German average (ca. 6%), receiving 2,782 DM/inhabitant as opposed to 2,974 DM (see Table 4). The spatial planning regions bordering on Poland are certainly not the worst off areas of East Germany with relation to the flow of funding. Of the 22 spatial planning regions in East Germany, those regions on the German-Polish border can be ranked as follows in terms of the level of funding granted for businesses (in relation to population): 1 (Uckermark-Barnim), 10 (Lausitz-Spreewald), 14 (Oderland-Spree), and 15 (Vorpommern). Only the spatial planning region Oberlausitz-Niederschlesien is ranked 21$^{st}$ (last but one). The "top ranking" of the spatial planning region Uckermark-Barnim should not hide the fact that a few major projects (mineral oil processing, paper processing) influenced the high level of funding in this region (Eickelpasch/ Pfeiffer 1998, 40, see also the data on manufacturing investment in Table 3).

Table 4:
Funding of business investment in the framework of the joint project "Improvement of the regional economic structure" along the German-Polish border

| Spatial planning region | Investment in DM per inhabitant | Number of cases per 10,000 inhabitants | Funding in DM per inhabitant |
|---|---|---|---|
| Vorpommern | 11,137 | 34 | 2,610 |
| Uckermark-Barnim | 20,217 | 22 | 4,706 |
| Oderland-Spree | 11,028 | 24 | 2,645 |
| Lausitz-Spreewald | 12,540 | 26 | 2,807 |
| Oberlausitz-Niederschlesien | 8,963 | 26 | 2,135 |
| Spatial planning regions along the border as a whole | 11,952 | 27 | 2,782 |
| *New Länder (excluding Berlin) as a whole* | *13,547* | *28* | *2,974* |

Source: IWH calculations, based on figures from the Federal Office for the Economy and the Federal Statistical Office.

An assessment of the funded investment by type of investment (unfortunately figures were only available for the period 1990-1994) reveals that in the spatial planning regions along the border, projects to set up new businesses account for 44% of the total funded investment projects. Such projects made up 52% of the East German average. Correspondingly, enterprise investment projects in existing businesses play a more important role, with a share of 56% as opposed to 48% of the East German average. Therefore, the spatial planning regions along the border were less successful in securing new investors compared to the East German average. Investment in medium-sized enterprises in the border regions funded by the *Kreditanstalt für Wiederaufbau* in the framework of ERP-loan programmes is also below average (see Table 5).[25]

Table 5:
Loans granted by the *Kreditanstalt für Wiederaufbau* in the framework of ERP-programmes in the period 1990-1997 in the East German spatial planning regions along the German-Polish border

| Spatial planning regions | Cases | | Total loan | |
|---|---|---|---|---|
| | Number | Number of cases per 10,000 inhabitants | DM (mn.) | DM per inhabitant |
| Vorpommern | 1,849 | 35 | 541 | 1,010 |
| Uckermark-Barnim | 970 | 31 | 235 | 748 |
| Oderland-Spree | 1,240 | 28 | 349 | 784 |
| Lausitz-Spreewald | 3,004 | 42 | 693 | 965 |
| Oberlausitz-Niederschlesien | 3,462 | 47 | 748 | 1,025 |
| Spatial planning regions along the border as a whole | 10,525 | 38 | 2,566 | 936 |
| *New Länder as a whole (excluding Berlin)* | *63,976* | *45* | *16,575* | *1,163* |

Source: IWH calculations based on figures from the *Kreditanstalt für Wiederaufbau* and the Federal Statistical Office.

In the framework of the funding of *business-related infrastructure*, subsidies totalling around 4.9 bn. DM or 1,797 DM per inhabitant were awarded (Table 6). This means that the infrastructure funding per inhabitant lies above the East German average of 1,633 DM. Investments to an amount of 7.2 mn. DM were jointly financed by the funding. These above average infrastructural measures do not however concern all spatial planning regions but only Vorpommern and Oberlausitz-

[25] The *Kreditanstalt für Wiederaufbau* is a federal bank aimed at economic promotion via loan and guarantee programmes and other measures.

Niederschlesien. These regions have the lowest per capita funding for industrial investment. The grants are awarded in the border regions above all for the acquisition of industrial premises (29%), tourism facilities (24%), sewage and waste removal (15%), transport connections (15%) and training institutions (6%). The share of tourism projects lies above the East German average in all border regions except Uckermark-Barnim.

Table 6:
Funding of business-related infrastructure investment in the framework of the joint project "Improvement of the regional economic structure" in the period 1990-1998 in the East German spatial planning regions along the German-Polish border

| Spatial planning region | Investment in DM per inhabitant | Number of cases per 10,000 inhabitants | Funding in DM per inhabitant |
|---|---|---|---|
| Vorpommern | 3,519 | 11 | 2,435 |
| Uckermark-Barnim | 1,660 | 2 | 1,251 |
| Oderland-Spree | 2,412 | 2 | 1,641 |
| Lausitz-Spreewald | 2,066 | 3 | 1,522 |
| Oberlausitz-Niederschlesien | 3,038 | 10 | 1,932 |
| Spatial planning regions along the border as a whole | 2,617 | 6 | 1,797 |
| *New Länder as a whole (excluding Berlin)* | *2,532* | *5* | *1,633* |

Source: IWH calculations on the basis of figures from the Federal Office for the Economy and the Federal Statistical Office.

To sum up, the funding of industrial investment in the framework of the programme on "Improvement of the regional economic structure" is one element of a compensatory strategy. The granting of business subsidies has undoubtedly helped to compensate the locational disadvantages of the border regions. Supplementary infrastructure measures have attempted to create prior input to attract foreign investors (and create better conditions for local businesses). It is unlikely that investments of this amount would have been made without the funding. Nevertheless, the spatial allocation of the funded investments and especially the less important role played by start-up investment shows that regional political subsidies only have a limited spatial influence in favour of the border regions. Although there are no empirical findings for the border regions, allocative distortions, for example in the form of windfall profits or substitution effects through capital investment funding cannot be ruled out (see Schalk/Untiedt 1999). As the programme is a typical instrument for a global compensatory regional policy, one cannot expect that it will directly remove border-specific shortfalls (e.g. barriers to cross-border business co-operation). To overcome these shortfalls, the GRW can at best make an indirect contribution by improving the competitiveness of the businesses funded in terms of quality and price through modernising the capital stock. Whether and to what extent small-scale cross-border economic links will emerge does not however just rely on modern regional capital stock, but on many other circumstances. The interviews conducted with experts indicate a series of obstacles to co-operation, above all in the socio-cultural field. The German-Polish border continues to represent a major language barrier. There remain mental reservations and also fears on the part of the population with regard to cross-border economic relations.

The EU joint initiative Interreg offers particular support in this area. Interreg funding can be assigned to a border-specific regional policy. Almost 900 million marks are available for the East German border regions to Poland and the Czech Republic for the period 1994 to 1999. According to expert estimates, the number of projects to promote cross-border economic co-operation is currently still very low. Proposals for new institutions, information centres and meeting centres are the main

projects. Cross-border culture projects are in part easier to arrange than economic ones. One hindrance is that - unlike with borders within the EU - the Interreg funding stops at the external borders of the EU.[26]

To sum up, Interreg funding can be classed as a border-specific regional policy. Even if cultural and other projects which have a positive influence on the intangible locational factors are thus able to improve locational conditions and heighten growth in the border regions, it is clear that at present Interreg is not optimally arranged. Business disadvantages caused by the border must be targeted and eliminated more effectively.

### *3.3. Own-initiatives in the regions: "Network for attracting businesses and providing investor services in East Brandenburg"*

As central funding provision tends to cause unitary problem-solving strategies, assistance policy for the benefit of the border regions at EU, federal and *Länder* level needs to be supplemented with a decentralised regional policy which is directly linked to concrete regional strengths and weaknesses in the area and can generate regional development strategies. An example illustrating the decentralised regional policy in East Brandenburg follows below:

The project concerns a concept for a "Network for attracting businesses and providing investor services in East Brandenburg" (Ministry of Economics 1998). The concept is a border-specific regional initiative. It is based however partly on traditional equalisation-oriented regional policy instruments (business subsidies and the promotion of business-related infrastructure). The concept was developed by the Ministry of Economics and the economic assistance organisation in Brandenburg. The development of such a concept came about as a result of various problems. These included the lack of co-ordination between the approximately 50 economic assistance institutions at regional or local level, cited as a problem in the past by experts in the region. Identification with the region East Brandenburg was considered to be low. The situation in the border regions was, to the regret of observers, often seen in a negative light. The border location was not marketed in a targeted and co-ordinated manner. Cross-border co-operation was considered unsatisfactory.

During the search for alternative regional strategies, the concept for a network for attracting businesses and providing investor services was eventually developed. At the core of the project is the idea that, in accordance with investment locations and special economic zones in Poland, on the German side of the border well developed industrial sites will be marketed together with the generous possibilities for funded investment. The intention is to conduct international locational marketing together with the Polish side. To convince investors of the advantages of having two locations, one on either side of the Oder, model calculations on having a "dual location" in Brandenburg and Poland were made. Model calculations for the metalworking, micro-electronics/electrical appliances sectors and for call centres all show that a dual location is more favourable than if investment is only made on one side of the border. However, depending on the scale of investment and the cost structure the benefits will be felt most on one or the other side of the border. With a major and capital intensive project, the generous investment funding in Brandenburg is more attractive. In the case of smaller labour-cost intensive projects the Polish side is more

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[26] A special section of the Phare programme exists in Poland to deal with cross-border co-operation. However, the project-related co-operation between these political fields does not function very well at present. (see Roch et al. 1998, 48). Discussions with decision-makers at *Land* level and the evaluation reports on Interreg funding have revealed differences in the administrative structures on both sides of the border and the fact that the Interreg and Phare programmes belong to different political fields of the European Union to be obstacles to a better co-ordination between the Interreg and Phare programmes.

favourable. The model calculations are an instrument which should help investors optimise their projects by choosing a dual location. In addition, it is planned to market the locational advantages of the Euroregions Pomerania, Viadrina and Spree-Neiße-Bober and to enhance the image of the region (Investor Centre East Brandenburg 1999; Ministry for Economics 1999, 1). It is of course impossible to comment on the effectiveness of this dual-location marketing in view of the short period for which this initiative has been in operation. Moreover, it has been asked how the free movement of persons between both sides of the border can be achieved in the framework of the "dual-location" concept (Schröder 1999). Having corresponding industrial locations requires a trouble-free cross-border movement of goods and persons. Therefore, measures to develop infrastructure also belong to the project to attract businesses and provide investor service in East Brandenburg.

To sum up, the "Network for attracting businesses and providing investor services in East Brandenburg" represents the first attempt to convert the general equalisation-oriented strategy for regional policy into a border-specific regional policy. The border location is deliberately used to assert a locational advantage and the attempt made to quantify locational advantages. The location is marketed in conjunction with Polish partners. The concept seeks to integrate various fields (information, advice, infrastructure measures, support for existing businesses), which are important for attracting businesses and providing investor services into a global concept. One criticism is that the concept depends largely on the granting of business subsidies. If such subsidies were to be cut as a result of public coffers being low or to avoid allocative distortion then the viability of this concept would be called into question.

## 4. Conclusion

Theoretical premises do not allow any clear conclusion to be drawn as to whether the opening up of borders has a positive or negative effect on the border regions. The present empirical analysis of the German regions on the Polish border shows that economic development is unfavourable in the majority of these regions compared to the East German average. However, the causes for this are not to be attributed to the border location but rather to the fact that the border regions are part of the East German transformation economy. Along the border there are thus regions such as Vorpommern or Uckermark-Barnim which belong to the weakest regional economies in the new *Länder* but also better-performing regions such as Oberlausitz in the south. Processes triggered by the transformation of the GDR central command economy into a market economy, such as sectoral structural change or the abolition of non-productive labour, and shortfalls such as insufficient infrastructure are particularly prominent in the economically weak regions at the German-Polish border.

Regional policy can respond to the problems of a region located at a border with specific compensation for disadvantages. To arrange this efficiently, it is important to draw a clear distinction between various possible regional strategies and, moreover, to make use of their respective advantages. The instruments introduced in the border regions are to a large extent part of a global equalisation-oriented regional policy which applies generally to regions lagging behind in terms of development. Border-specific obstacles can at best be indirectly removed with such an equalisation-oriented regional policy. On account of the limited effect of subsidies granted in the framework of regional policy, in the border regions border-specific political measures are being developed and implemented instead. These include the targeted marketing of the border area as a location for business settlement as well as various information and advisory bodies for small and medium-sized enterprises to remove barriers to entry in the Polish market. Interreg also deals with border-specific

shortfalls and the improvement of intangible locational factors. In the further course of the study, suggestions will be made as to how the border-specific strategy could be improved and its place in the global concept for a regional policy for the German regions bordering on Poland will be discussed in more detail.

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Appendix: Calculation of the coefficient of specialisation (see Schätzl 1994, 65):

The coefficient of specialisation $CS_i$ compares the concentration of m industries in a sub-region i with the concentration of these industries in the macro-region to which i belongs. The smallest value 0 points to a complete congruence of the industrial structure of the sub-region with that of the macro-region. The closer $CS_i$ gets to 1, the more specialised the sub-region is.

The method of calculation is as follows:

$$KS_i = \frac{1}{2} \sum_{j=1}^{m} \left| \frac{B_{ij}}{\sum_{j=1}^{m} B_{ij}} - \frac{\sum_{i=1}^{n} B_{ij}}{\sum_{i=1}^{n} \sum_{j=1}^{m} B_{ij}} \right|$$

With:

| | |
|---|---|
| $L_{ij}$ | Employment in industry j in sub-region i |
| $\sum_{j=1}^{m} B_{ij}$ | Total employment in sub-region i |
| $\sum_{i=1}^{n} B_{ij}$ | Employment in industry j in the macro-region |
| $\sum_{i=1}^{n} \sum_{j=1}^{m} B_{ij}$ | Total employment in the macro-region |