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# Business environment and enterprise behaviour in East Germany compared to West Germany and central Europe

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## **Abstract**

This paper examines institutional differences between the former East and West Germany and four central European transition countries (the Czech Republic, Hungary, Poland and the Slovak Republic). Using enterprise survey data we show that the quality of both formal and informal institutions in East Germany still differs from West Germany. In addition, central European transition countries are shown to have closed the gap in institutional quality with East Germany in many areas. We also show that enterprises in the central European transition countries have compensated for country level institutional deficiencies by focusing on company-level innovation and investment in human capital. Meanwhile, East German enterprises report investments in new products and processes as well as in skills well below the level of not only West Germany but also the central European transition countries.

*Keywords: institutions, business environment, enterprise behaviour, transition, East Germany, central Europe*

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## INTRODUCTION

Germany's unification in 1990 was expected to provide East Germany with a well functioning institutional framework for a market economy, eliminating the need to create new institutions from scratch as was the case in other transition countries in central and eastern Europe. In the literature on transition in former East Germany, the failure of former East Germany to fully converge with former West Germany<sup>1</sup> in the last 17 years is explained by several factors. A widely held explanation is a severe initial loss of competitiveness due to strong currency appreciation as a consequence of the currency reform – the exchange of the East German mark for the West German mark at a ratio of 1:1 (for example Akerlof *et al.* 1991, Hax, 2003). Another broadly accepted explanation is the introduction of inflexible collective wage bargaining at the German national level, leading to wage increases in East Germany of a far higher pace than productivity increases would allow (for example Sinn 2002: 123; Boltho, Carlin and Scaramozzino 1997; Quehenberger 2000).

This paper focuses on institutional factors,<sup>2</sup> including the business environment and enterprise behaviour, that may help to explain the failure of East Germany to catch up with West Germany. Our main null hypothesis is that East German institutions are not statistically different from institutions in West Germany. We test the main hypothesis across a broad range of institutional indicators, controlling for enterprise characteristics such as size, ownership, location and sector of operations. On the basis of identified differences and their relation to enterprise performance, we draw lessons for the East German economy from the more dynamic transition countries in central Europe.

We argue that in addition to the main explanatory factors identified in the literature, the adaptation of West German institutions in East Germany failed to create the same business environment 'overnight'. In fact, we show that substantial differences in the quality of institutions in East and West Germany, measured by managers' perceptions of business obstacles and impartial business environment indicators, prevail to this day. In many areas the central European transition countries have managed to close the institutional gap with East Germany, while maintaining the competitive advantage of substantially lower wages.

We also show that the behaviour of enterprises in East Germany differs from that in both West Germany and central Europe, with a particularly low level of enterprise restructuring aimed at increased competitiveness, including the introduction of new products and processes, and surprisingly limited use of formal enterprise training programmes<sup>3</sup> for skills transfers. As a result, enterprises in East Germany have amplified initial loss of competitiveness, due to exchange rate and wage factors, by insufficient investment in both new products and skills of their workforce.

The assessment of institutional quality is based on the comparison of East Germany with West Germany as well as with four formerly centrally planned economies in central Europe –

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<sup>1</sup> For simplicity we will refer to former East and West Germany as East Germany and West Germany, respectively.

<sup>2</sup> We define institutions following North (1991) as 'humanly devised constraints which structure political, economic and social interaction' consisting of *formal rules* (constitutions, laws and property rights) and *informal constraints* (sanctions, taboos, customs, traditions and codes of conduct).

<sup>3</sup> Formal in-company training programmes do not include vocational training.

the Czech Republic, Hungary, Poland and the Slovak Republic.<sup>4</sup> The rationale for our choice of transition comparators is mainly the similarity in economic structures and developments of central European communist countries, including former East Germany, in the 40 years prior to the German unification in 1990. We acknowledge that these countries did not have identical economic systems, with Hungary and Poland providing more liberal conditions for small entrepreneurs and having closer links to market economies in Western Europe compared to the rigid state system in the former communist Czechoslovak Republic. However, in our view the similarities between these economies are sufficient to use them as a benchmark to assess the successes and failures of transition in the former East Germany.

The empirical analysis in this paper is based on the Business Environment and Enterprise Performance Survey (BEEPS) undertaken by the European Bank for Reconstruction and Development (EBRD) in cooperation with the World Bank in 2004-05. The survey instrument is described in more detail in section two.

The remainder of this paper is structured as follows: In the first section we provide a brief survey of the literature on the transfer of institutions to East Germany. The second section describes the data and methodology. In the third and fourth sections we empirically examine potential differences in institutional quality between East and West Germany and central Europe using the BEEPS survey data. We assess institutional differences in two ways. On the one hand we consider the business environment for entrepreneurs, looking at both firms' perceptions of the business environment and objective business environment indicators (section three). On the other hand we look at the behaviour of entrepreneurs themselves (section four). In section five we explore the links between business environment, enterprise behaviour and performance to show how institutional deficiencies are related to enterprise performance. The sixth section concludes and provides policy recommendations.

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<sup>4</sup> We will refer to these four countries throughout the paper as central Europe.

## 1. LITERATURE REVIEW

Most authors analysing institutions explicitly or implicitly distinguish between formal and informal institutions using the methodology summarised in North (1991), who defines institutions as ‘humanly devised constraints which structure political, economic and social interaction’ consisting of formal rules (constitutions, laws and property rights) and informal constraints (sanctions, taboos, customs, traditions and codes of conduct). Information on informal non-market relationships between market participants can also be used as a measure of trust which is widely recognised as facilitating economic interaction in the presence of uncertainty (Raiser, 1999).

According to Carlin’s work on the German transfer of institutions (Carlin 1993 and Carlin 1996) there was a successful transfer of ‘some but not all’ institutions from West to East Germany. Institutions that have been successfully transferred to East Germany are the formal institutions such as the legal framework, the judicial system, administrative agencies and representational bodies, i.e., institutions that are introduced by government decisions and changes in legislation. However, the transfer of informal institutions, in other words the implementation of formal institutional changes as expressed by the day-to-day operations of authorities, as well as the transfer of the informal relationship between market participants such as companies, banks, employees and industry associations, is more difficult and remains incomplete. Carlin (1996), for instance, states that East Germany’s competitive disadvantage was largely caused by lasting difficulties in transferring inter-firm networks and technology transfer systems. Indications of weaker networks for the diffusion of innovations are also provided by Kronthaler’s (2003) finding that East German companies are substantially less innovative than their western counterparts.

Similarly, Elster and Offe (1998, p. 18) state in their assessment of the difficulties of creating a new political order in post-communist states that informal institutions such as legacies, associative practices and the way entrepreneurial and other economic interests are pursued are among those determinants of change that cannot be easily passed on. A legacy of distrust is not straightforwardly changeable by policy measures (or by ‘formal institutions’).

Wiesenthal (1999) also discusses the successful transfer of formal institutions from West to East Germany and contrasts this to the impact of informal institutions. He maintains that the equal functioning of ‘copied’ rules is not guaranteed in different social contexts, because a series of individual motives, actions and actors shape the institutional transfer. The latter is, thus, not only a product of the federal government but also of a number of private actors, which is more complex to oversee and predict.

In fact, as shown by Soskice (1993) in a paper on innovation strategies of companies, long-term cooperative relationships between agents from different industries that are not mediated through market transactions have always played a vital role in the post-war West German institutional set-up. A ‘collective knowledge of reputations’ developed as a result of long-term relationships between firms and the stability in banking and business association personnel.

In a study on small and medium-sized enterprise (SME) lending based on banking survey data, Lehmann *et al.* (2004) show one potential consequence of weak ‘collective knowledge of

reputations' and limited trust: East German SMEs face higher loan prices and collateral demanded by banks compared to their western counterparts.

Another assessment of differences in informal institutions is presented in Alesina and Fuchs-Schuendeln's (2006) analysis of preferences of East German citizens compared to West Germans. They find that East Germans are more in favour of redistribution and state intervention, which might explain their different views on the quality of formal institutions compared to people living in West Germany.

As mentioned above, trust is widely recognised as facilitating economic interaction. Rainer and Sielder (2006) investigate the levels of trust in East and West Germany. Using data from the SOEP (Socio Economic Panel) and the ALLBUS (General German Social Survey) they find that East Germans have a significantly less trustful attitude than West Germans.

To sum up, the literature described above shows that while formal institutions may have been successfully transferred from West to East Germany, the quality of 'informal' institutions might substantially differ due to the difficulty in transferring how people interact in their day-to-day business. In this paper we empirically examine potential institutional differences using the BEEPS survey data. First, we will investigate the differences in the business environment, measuring perceptions and more impartial indicators of the business environment, which provide an assessment by enterprises of the effectiveness of formal institutions. Next, we will describe differences in enterprise behaviour, some of which may be attributed to differences in the business environment. Finally we will analyse the variation in enterprise performance in relation to business environment and enterprise behaviour.

## **2. DATA DESCRIPTION AND METHODOLOGY**

One of the key lessons of transition in central and eastern Europe is the potentially huge gap between the newly adopted legislation and its implementation in practice (see the EBRD's *Transition Report 2005* for more details). Enterprise surveys such as the one used in this paper allow us to assess the quality of the institutional environment. This includes the quality of the implementation of reforms aimed at removing investment obstacles and how the quality of both formal and informal institutions is reflected in enterprise behaviour and performance. Moreover, such surveys allow us to compare management perception – managers' subjective views on the extent of business obstacles posed by different institutional factors for the operation and growth of their businesses – with more objective indicators of the business environment, which analyse institutional differences on the basis of data that should be unrelated to the views of the surveyed person. More direct measures of the business environment are, for example, the time spent with officials to register a business or the share of enterprises turned down when applying for a loan.

The BEEPS was undertaken jointly by the EBRD and the World Bank among 13,500 firms in 26 transition countries in 1999, 2002 and 2005, and eight non-transition countries in 2004. In our paper we use the data from the 2005 survey in four central European transition countries (the Czech Republic, Hungary, Poland and the Slovak Republic). The data for Germany, including an indicator allowing us to distinguish whether the enterprise is located in former East or West Germany, are from 2004. As a result of the timing of the surveys, all the

enterprises analysed in the paper operated in the Single Market of the European Union and therefore should be subject to similar formal institutional set-ups.

The distribution of the sample between manufacturing and service sectors was determined according to the sector's relative contribution to GDP in each country (ensuring that this is also the case separately in both East and West Germany). Firms that operate in sectors subject to government price regulation and prudential supervision, such as banking, utilities and railways, were excluded from the sample, as were farms and other types of agriculture enterprises. Companies that had 10,000 employees or more were also excluded, as were firms that started their operations between 2002 and 2005. We have a total of 386 observations for individual firms for East Germany, 811 for West Germany, and 2,148 for the four central European transition countries.

The BEEPS contains questions on the business environment and enterprise behaviour. Regarding the business environment, we are able to compare the quality of the judiciary, the efficiency of a firm's interaction with public administration, the extent of corruption, access to finance and the functioning of labour markets. We have chosen those particular categories because they all give insights into the ways laws are implemented or how different agents interact in a given market, including not only inter-company interactions but also interactions between enterprises and the financial sector and between enterprises and workers. We can therefore treat them as a comprehensive summary of both formal and informal institutions according to the definition described above.

The way enterprises interact among themselves as well as with the financial sector and workers is reflected in their financial decisions and decisions to implement a wide range of restructuring measures, including operational, managerial and labour restructuring. Certain financial decisions, such as whether to provide trade credit to trading partners, are interesting as proxies for informal relationships between companies or measures of inter-company trust. As Carlin (1996) and Kronthaler (2003) stated, lasting difficulties in transferring inter-firm networks and technology transfer systems might lead to weaker networks for the diffusion of innovations. We therefore look at enterprise restructuring measures to see if our data confirm the tendencies outlined by Carlin and Kronthaler.

To analyse the differences between East and West Germany and central Europe, we test for statistical significance of both unweighted and weighted country averages of the chosen institutional indicators. First, we test the null hypothesis  $H_0: \mu_a = \mu_b$ , where  $\mu_a$  is the unweighted country average of an indicator  $i$  in region  $a$ , and  $\mu_b$  is the unweighted country average of indicator  $i$  in region  $b$ . We test the null hypothesis against the alternative hypothesis  $H_1: \mu_a < \mu_b$ . The regions  $a$  and  $b$  are former East Germany and former West Germany, respectively. Secondly, we test the null hypothesis  $H_0: \mu_b = \mu_c$ , where  $\mu_a$  is the unweighted country average of an indicator  $i$  in region  $b$  and  $\mu_c$  is the unweighted country average of indicator  $i$  in region  $c$ . We test the null hypothesis against the alternative hypothesis  $H_1: \mu_b < \mu_c$ . The regions  $b$  and  $c$  are the four central European countries and former East Germany, respectively. Finally, we test the same hypotheses but control for the enterprise characteristics, such as the size (micro, small, medium and large), ownership (state-owned, domestic private and foreign-owned), location (capital, urban and rural) and sector (mining, construction, manufacturing, transport, trade, real estate and hotels and restaurants).

In total we have performed 120 tests of the unweighted country averages and the same number of tests of the country averages controlled for enterprise characteristics. In 15 cases, (12.5 per cent of cases), the results were different for tests of simple averages compared to tests of averages controlled for enterprise characteristics.

### **3. BUSINESS ENVIRONMENT**

#### *Protection of property rights and the quality of the judiciary*

The protection of property rights, supported by an independent judiciary, is one of the key requirements for a properly functioning market economy and as such is one of the main indicators used to assess the quality of a country's institutions. As shown in Table 1, according to management perception, the functioning of the judiciary affects firms more in East Germany than in West Germany and is perceived as worst in central Europe.

Objective indicators may, and should, explain the difference in perception. In terms of resolving overdue payments, East and West German courts seem to be equally efficient. More insight into the different perceptions of the judiciary between West and East is provided by the fact that East German firms appear more often in courts – both as plaintiffs and defendants – although this difference is statistically less significant once we control for enterprise characteristics. In terms of the number of cases over the past three years East German firms appeared in court between 30 and 50 per cent more often than West German firms.<sup>5</sup> Thus, the perception of the judiciary as a business obstacle may differ due to the different likelihood of the need to use the judiciary to resolve commercial disputes.

According to our data the judiciary continues to be a bigger problem in the central European countries. The judiciary is not only perceived as more problematic, it is also less efficient in terms of the time it takes to resolve overdue payments. Further, the judiciary is not used as a means to solve inter-firm problems as frequently as in Germany, indicating that the institutional gap for central European transition countries in judiciary remains significant.

The more frequent appearance of East German firms in courts, both as plaintiffs and as defendants, might also indicate a higher number of cases in which the parties involved were unable to sort conflicts and to agree out of court. This might point to the direction of less developed informal institutions such as a lack of trust. According to the data, while West German firms seem to be better able to settle 'informally', i.e. out of court, East German firms seem to stick more frequently to formal institutions.

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<sup>5</sup> The presence of firms in courts should actually be treated under enterprise behaviour but for the purpose of explaining perception it is discussed in this chapter.

**Table 1 – Protection of property rights and the quality of the judiciary**

<b>Management perception</b>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Judiciary as a business obstacle	1.4	<**	1.7	<**	2.1
Confidence in the legal system	4.7	~	4.7	>**	3.4
<b>Objective indicators</b>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Plaintiff in courts (number of cases in last three years)	1.4	<* (~)	2.0	~	2.1
Defendant in courts (number of cases in last three years)	0.4	<** (<*)	0.8	>**	0.3
Share of companies experiencing overdue payments (in per cent)	18.1	~	18.4	<**	57.9
Time to resolve overdue payments (in weeks)	5.3	~	4.8	<**	12.2

Source: BEEPS 2004-05.

Notes: Simple averages of responses for all enterprises in a given region are presented. The scale for management perceptions is 1-4 with 1 = no obstacle; 2 = minor obstacle; 3 = moderate obstacle; and 4 = major obstacle. The scale for confidence in the legal system to uphold contracts and property rights is 1-6 with 1 = strongly disagree; 2 = disagree in most cases; 3 = tend to disagree; 4 = tend to agree; 5 = agree in most cases; and 6 = strongly agree.

\* = Difference is statistically significant at 5 per cent level; \*\* = Difference is statistically significant at 1 per cent level; ~ = No statistically significant difference. Signs in the brackets refer to differences if they differ once we control for enterprise characteristics such as the location dummies (capital, rural and urban areas), ownership dummies (state, local private and foreign private), sector dummies (manufacturing, real estate, construction, trade, hotels and restaurants and transport) and size dummies (micro, small, medium and large).

### **Public administration**

Interactions with public officials may become an obstacle to enterprise development when firms have to spend a large amount of time in dealing with public officials regarding the application and interpretation of laws and regulations and/or a high number of various inspections. In this respect, enterprises in East Germany report a similar administrative burden to their West German counterparts while senior managers in central European companies report that they spend significantly more of their time dealing with public officials on the interpretation of laws and regulations and face a much lighter inspection regime.

Enterprises in East Germany face between two and five times as many inspections regarding labour and social security, fire and building safety, and environment regulations and inspections by municipal police than enterprises in central Europe. In this respect it is surprising that East German enterprises do not perceive public administration as a significantly bigger business obstacle than their counterparts in central Europe. A potential explanation for East German enterprises' acceptance of frequent inspections might be their

predictability and efficiency, although the available data do not allow us to confirm this hypothesis.

**Table 2 – Public administration**

<b>Management perception</b>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Tax administration	2.4	< <sup>*</sup> (< <sup>**</sup> )	2.6	~	2.7
Customs and trade regulations	1.5	< <sup>**</sup>	1.8	~	2.0
Business licensing and permits	1.7	< <sup>**</sup>	1.9	~	1.9
<b>Objective indicators</b>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Time spent with officials (per cent of total working time)	1.55	~	1.71	< <sup>**</sup>	4.18
Number of inspections per year (average)	2.73	~	3.06	> <sup>**</sup>	1.32

Source: BEEPS 2004-05.

Notes: Simple averages of responses for all enterprises in a given region are presented. The scale for management perceptions is 1-4 with 1 = no obstacle, 2 = minor obstacle, 3 = moderate obstacle and 4 = major obstacle. The different types of inspections include labour and social security inspections and fire and building safety inspections.

\* = Difference is statistically significant at 5 per cent level; \*\* = Difference is statistically significant at 1 per cent level; ~ = No statistically significant difference. Signs in the brackets refer to differences if they differ once we control for enterprise characteristics such as the location dummies (capital, rural and urban areas), ownership dummies (state, local private and foreign private), sector dummies (manufacturing, real estate, construction, trade, hotels and restaurants and transport) and size dummies (micro, small, medium and large).

### ***Unofficial payments***

Settling with officials without the need to make unofficial payments is important for a business-conducive environment and one of the most common indicators used in international comparisons of institutional quality. The need to make unofficial payments to speed up administrative procedures can represent substantial costs for firms. When asked how common it is to make unofficial payments in general and how predictable these payments are, managers' responses indicate that these are still more common, and also more predictable, in central Europe than in either East or West Germany. However, unofficial payments regarding public services and obtaining business licences and government contracts are equally frequent in East Germany and central Europe, and in both significantly more likely than in West Germany. The extent of unofficial payments in connection with inspections, tax administration, customs and the judiciary in East Germany is also greater than in West Germany, although smaller than in central Europe.

The highest extent of unofficial payments seems to be in relation to government contracts. East German enterprises report that the size of unofficial payments as a share of total contract

value is almost twice as high as in West Germany but still lower than in central Europe. Unofficial payments in East Germany are estimated to reach 2.5 per cent of total contract value while in central Europe these exceed 5 per cent of contract value.

To sum up, unofficial payments still seem to be a more significant problem in central Europe than in Germany. However, there is also empirical evidence that unofficial payments are more frequently used in East than in West Germany. Neither central European nor East German companies feel that they have as good opportunities as West German companies to avoid unofficial payments by approaching other or more senior officials.

**Table 3 – Unofficial payments**

<b>Management perception</b>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Corruption as a business obstacle	1.35	<**	1.51	<**	2.07
<b>Objective indicators</b>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Frequency of corruption	1.76	~	1.85	<* (<**)	2.00
Predictability of corruption	1.81	~	1.91	<**	2.17
Opportunity to avoid corruption by approaching another official	4.65	>**	4.16	>**	3.06
Overall corruption ( <i>per cent of sales for those paying bribes</i> )	0.98	<**	1.42	<**	2.56
Size of unofficial payments for government contracts ( <i>per cent of contract value for those paying bribes</i> )	1.35	<**	2.50	<**	5.61

Source: BEEPS 2004-05.

Notes: Simple averages of responses for all enterprises in a given region are presented. The scale for management perceptions is 1-4 with 1 = no obstacle; 2 = minor obstacle; 3 = moderate obstacle; and 4 = major obstacle. The frequency and predictability of corruption as well as the opportunity to avoid corruption are categorical indicators on a scale of 1-6 (never, seldom, sometimes, frequently, usually and always).

\* = Difference is statistically significant at 5 per cent level; \*\* = Difference is statistically significant at 1 per cent level; ~ = No statistically significant difference. Signs in the brackets refer to differences if they differ once we control for enterprise characteristics such as the location dummies (capital, rural and urban areas), ownership dummies (state, local private and foreign private), sector dummies (manufacturing, real estate, construction, trade, hotels and restaurants and transport) and size dummies (micro, small, medium and large).

## *Access to finance*

Access to finance is one of the key aspects of the institutional environment. Better financing terms and conditions, such as lower collateral requirements and longer maturities, enable companies to invest more in their activities as compared to servicing loans and negotiating refinancing arrangements. According to our data, managers in East Germany perceive both access to finance and the cost of finance as more problematic than their counterparts in West Germany who might benefit from well established, long-term relationships between enterprises and financial institutions ('collective knowledge of reputations' as discussed in Soskice, 1993).

Indeed, the likelihood of being turned down when applying for a loan is highest in East Germany compared to West Germany and central Europe. Whereas out of 100 loan applications 5.3 are turned down in West Germany and 4.3 are turned down in eastern Europe, as many as 17 applicants will not receive a loan in East Germany. Also, the time taken to agree on a loan is much longer in East Germany than in West Germany. It still takes over 30 days for East German firms to agree on a loan on average compared to less than 20 days in West Germany.

However, once East German firms receive a loan, they face relatively favourable conditions. The duration of loans in East Germany is on average the longest: five-and-a-half years compared to less than three years in central Europe and just over four years in West Germany. Also, interest is the lowest in East Germany – about 60 basis points below interest rates paid for loans by West German firms and 440 basis points below interest rates paid by surveyed enterprises in central Europe. The level of collateral as a share of the loan value is similar in East and West Germany and to some extent lower than in central Europe. An interesting question, going beyond the scope of this paper, is whether these differences in terms and conditions of bank loans reflect a different structure of East German economy, i.e., a higher share of sales to the public sector.<sup>6</sup> In our tests, controlling for standard enterprise characteristics such as size, ownership, location and sector, does not alter the results.

In addition to better terms and conditions of commercial loans, East German enterprises are also more likely to have access to subsidies. Overall, 21 per cent of surveyed East German companies received subsidies (from either the government, local authorities or the European Union) compared to 13.5 per cent in central Europe.<sup>7</sup>

Overall it seems that for East German enterprises access to finance is a bigger business obstacle than for West German enterprises, mainly due to the much higher rate at which their loan applications are turned down, despite the fact that their terms and conditions are better than those of surveyed enterprises in other regions. This does not confirm the results of the Lehmann *et al.* (2004) analysis of the banking data, which finds that East German SMEs face higher loan prices and collateral demands. But the analysis still points to the same thing – that East German firms have less access to the financial markets than West German firms. While financial sectors in central European transition countries have developed rapidly in recent

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<sup>6</sup> Data on sales to the public sector are available on request.

<sup>7</sup> There is no statistically significant difference in the overall size of subsidies for those enterprises that receive them.

years, enterprises in this region still face much worse access to finance compared to West Germany and East Germany.

**Table 4 – Access to finance**

<i>Management perception</i>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Cost of finance	2.15	<**	2.56	<** (<*)	2.75
Access to finance	2.00	<**	2.57	~	2.51
<i>Objective indicators</i>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Collateral (per cent of loan value)	127.9	~	125.4	<**	154.3
Interest on loan (per cent)	8.3	>**	7.7	<**	12.0
Duration of loans (months)	50.9	<**	69.0	>**	33.7
Share of local currency loans (per cent)	98.7	~	98.3	>**	84.2
Time to agree the loan (days)	18.9	<**	30.9	~	36.4
Share of firms turned down for loan (per cent of firms without loan)	5.1	<**	16.4	>**	4.2
Share of firms receiving subsidies (per cent)	18.1	~	21.0	>**	13.5

Source: BEEPS 2004-05.

Notes: Simple averages of responses for all enterprises in a given region are presented. The scale for management perceptions is 1-4 with 1 = no obstacle; 2 = minor obstacle; 3 = moderate obstacle; and 4 = major obstacle.

\* = Difference is statistically significant at 5 per cent level; \*\* = Difference is statistically significant at 1 per cent level; ~ = No statistically significant difference. Signs in the brackets refer to differences if they differ once we control for enterprise characteristics such as the location dummies (capital, rural and urban areas), ownership dummies (state, local private and foreign private), sector dummies (manufacturing, real estate, construction, trade, hotels and restaurants and transport) and size dummies (micro, small, medium and large).

### ***Labour markets***

The last area of business environment indicators that we assess relates to labour markets. As mentioned above, inflexible collective wage bargaining at the German national level, leading to East German wage increases at a far higher pace than productivity increases, has been already identified in the literature as one of the key factors explaining the failure of East German enterprises to catch up with their West German counterparts (for example, Sinn 2002: 123; Boltho, Carlin and Scaramozzino 1997; Quehenberger 2000). According to our survey the perception of labour regulations as well as the skills and education of the available workforce as an obstacle to business operations is similar in East Germany and central Europe and is in both seen as a more severe business obstacle than in West Germany. However, filling vacancies with almost all types of workers, except for skilled workers, takes longer in West Germany than in former communist economies. This may be a result of higher unemployment in transition countries and in East Germany. Therefore the available survey data do not provide additional arguments related to the functioning of the labour markets to

explain the under-performance of the East German economy. It is important to note that trade unions have a strong voice in wage bargaining in central European transition countries, such as the Czech Republic and Poland, although the institutional set-up differs from Germany.<sup>8</sup>

**Table 5 – Labour markets**

<i>Management perception</i>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Labour regulations	1.90	<**	2.19	~	2.20
Skills and education of available workers	1.82	<**	2.03	~	2.11
<i>Objective indicators</i>	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Time to fill vacancies for managers	8.6	>**	6.2	~	5.6
Time to fill vacancies for professionals	7.0	>**	5.4	~	4.8
				(>*)	
Time to fill vacancies for skilled workers	3.8	~	3.5	~	3.5
Time to fill vacancies for unskilled workers	2.6	>**	1.6	~	1.8
Time to fill vacancies for non-production workers (sales and administration)	3.8	>*	3.2	>**	2.3
				(>*)	

Source: BEEPS 2004-05.

Notes: Simple averages of responses for all enterprises in a given region are presented. The scale for management perceptions is 1-4 with 1 = no obstacle; 2 = minor obstacle; 3 = moderate obstacle; and 4 = major obstacle. The time to fill vacancies is measured in weeks.

\* = Difference is statistically significant at 5 per cent level; \*\* = Difference is statistically significant at 1 per cent level; ~ = No statistically significant difference. Signs in the brackets refer to differences if they differ once we control for enterprise characteristics such as the location dummies (capital, rural and urban areas), ownership dummies (state, local private and foreign private), sector dummies (manufacturing, real estate, construction, trade, hotels and restaurants and transport) and size dummies (micro, small, medium and large).

<sup>8</sup> An interesting analysis, going beyond the scope of this paper, would involve comparing enterprise level estimates of hiring and firing costs in Germany with central Europe and their impact on the willingness of enterprises to create new jobs. These data are, however, not available in our survey and so fall beyond the scope of our investigation.

## 4. ENTERPRISE BEHAVIOUR

### *Lobbying and business conduct*

Enterprises are not only passive when it comes to the institutional framework; many enterprises lobby policymakers intensely, both directly and through a wide range of business associations. The survey evidence suggests that central European companies are more often lobbying for changes in the national legislation and regulation while East German firms are more active in lobbying local, sub-national governments, perhaps because there is a higher level of devolution and thus sub-national governments play a stronger role than in central Europe. Interestingly, East German enterprises are almost twice as likely to lobby sub-national governments as West German enterprises. It is likely that this finding is related to a higher level of unofficial payments in relation to awards of state contracts in East Germany compared to West Germany. Indeed, a probit regression of lobbying of sub-national authorities as a dependent variable on enterprise characteristics and the level of unofficial payments for state contracts as explanatory variables shows a significant and positive relationship between lobbying and bribing regarding state contracts (the regression results are available on request). Interestingly, we could not find a similar relationship between overall level of corruption and lobbying.

Business conduct of East German enterprises regarding tax and social security payments is better than in central Europe and, on the basis of the share of sales reported for tax purposes, also better than in West Germany. This observation might be related to a much stronger tax administration in Germany compared to transition countries in central Europe although we do not have any direct indicator on the quality of tax administration to test this hypothesis.

**Table 6 – Lobbying and business conduct**

	West Germany		East Germany		Central Europe
Share of firms lobbying for national legislation and regulation	2.5	~	2.6	<**	10.4
Share of firms lobbying for sub-national legislation and regulation	12.2	<** (~)	17.9	>**	8.6
Share of sales reported for tax purposes	94.0	<* (~)	95.1	>**	89.7
Share of workforce reported for tax purposes	94.3	~	93.9	>**	90.6

Source: BEEPS 2004-05.

Notes: Simple averages of responses for all enterprises in a given region are presented. All indicators presented in the table are in per cent.

\* = Difference is statistically significant at 5 per cent level; \*\* = Difference is statistically significant at 1 per cent level; ~ = No statistically significant difference. Signs in the brackets refer to differences if they differ once we control for enterprise characteristics such as the location dummies (capital, rural and urban areas), ownership dummies (state, local private and foreign private), sector dummies (manufacturing, real estate, construction, trade, hotels and restaurants and transport) and size dummies (micro, small, medium and large).

### ***Financial decisions***

The financial decisions of enterprises reflect the business environment as perceived by their management. For example, the decision to provide trade credits offers some insight into managers' assessments of the likelihood of being paid for goods or services delivered before payment has been made. In the survey this is shown by the percentage of sales or supplies paid before/after deliveries. In this respect, East German companies resemble West German firms, with a high percentage of their sales provided on credit and a high percentage of their supplies paid after the delivery. This type of enterprise behaviour reveals significant trust in inter-company financial relationships. Enterprises in central Europe provide trade credits to a much smaller extent, indicating a lower level of trust in the willingness or ability of their customers and suppliers to pay.

The question of trust in the ability or willingness of counterparties to pay is also closely related to the issue of overdue payments discussed in the previous section. The business environment indicators presented in Table 1 showed a much higher number of firms in central Europe experiencing overdue payments and a much longer time spent in resolving overdue payments. It therefore seems plausible that enterprises in central Europe would have less trust in their counterparties than companies in either East or West Germany, not least because they also have lower trust in the judiciary being able to resolve their commercial disputes.

A significant share of central European enterprises (32 per cent) do not seek a loan because they do not need it. This is more than 10 per cent more than in East and West Germany and may be related to the fact that central European enterprises invest a much higher share of profits than firms in East and West Germany. In addition, a further 7 per cent of central European enterprises, compared to 1-2 per cent in East and West Germany, do not take out loans because they believe it would be either too burdensome or too expensive. As a result, enterprises in central Europe are more likely to fund both working capital and new assets from their internal funds, while East and West German companies are more likely to use either debt or equity financing. The data on the need for external finance and the access to finance thus give us an interesting insight into the impact of institutions on business behaviour. While transition countries in central Europe indeed have worse access to finance than enterprises in East and West Germany, they are less affected by this institutional deficiency because they feel that they need external finance less often, i.e., the financial constraint is binding for a much higher share of firms in East Germany than in central Europe despite operating in a business environment with a more developed financial sector.

**Table 7 – Financial decisions**

	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Share of enterprises stating that they do not need a loan	21.1	~	19.4	<**	31.7
Share of enterprises stating that they do not want a loan because of terms and conditions	1.1	~	2.1	<**	7.2
Share of enterprises involved in mergers and acquisitions	2.1	~	2.8	<* (~)	6.0
Percentage of profits invested in the firm	34.3	>** (~)	27.5	<**	53.9
Percentage of sales paid after delivery/on credit	51.8	~	51.1	>**	44.4
Percentage of supplies paid after delivery	67.5	>** (>*)	60.4	>**	44.7

Source: BEEPS 2004-05.

Notes: Simple averages of responses for all enterprises in a given region are presented. All indicators presented in the table are in per cent.

\* = Difference is statistically significant at 5 per cent level; \*\* = Difference is statistically significant at 1 per cent level; ~ = No statistically significant difference. Signs in the brackets refer to differences if they differ once we control for enterprise characteristics such as the location dummies (capital, rural and urban areas), ownership dummies (state, local private and foreign private), sector dummies (manufacturing, real estate, construction, trade, hotels and restaurants and transport) and size dummies (micro, small, medium and large).

### ***Enterprise restructuring***

One of the most interesting findings regarding enterprise behaviour relates to restructuring measures, which might indicate the level of development of informal institutions related to implementing innovative measures. These institutions are supposed to be underdeveloped in East German enterprises, as suggested by Carlin (1996) and Kronthaler (2003). We have found that East German companies are indeed least likely to change their product mix by developing new products or upgrading existing ones while dropping others, as well as least likely to obtain a new product licence or new technology. While central European companies are more likely than their West German counterparts to introduce new products, it is West German companies that are more likely to upgrade existing products. As a result, enterprises in both central Europe and West Germany are more active in providing new or upgraded services, thus increasing their competitiveness, than East German companies.

The only area where East German companies carry out more improvements to their operations than West German firms, although still less so than central European enterprises, is in obtaining new accreditations. However, this is most likely a defensive measure, allowing these enterprises to keep up with evolving regulation and quality certification requirements, rather than an indication of innovative activities.

**Table 8 – Enterprise restructuring**

	<b>West Germany</b>		<b>East Germany</b>		<b>Central Europe</b>
Share of firms that developed a major new product	20.8	>**	10.6	<**	30.4
Share of firms that upgraded existing product	52.9	>**	29.8	<**	46.5
Share of firms that discontinued a major product	15.0	>**	5.7	<**	14.6
Share of firms that obtained a new product licence	8.5	>**	3.4	<**	7.4
Share of firms that obtained a new quality accreditation	4.8	<**	10.9	<*	15.9
Share of firms that acquired new technology	26.8	>**	15.9	<**	25.7
Fixed assets growth over past 36 months	2.1	~	2.3	<**	9.7
Capacity utilisation	82.8	<**	88.9	>**	83.7

Source: BEEPS 2004-05.

Notes: Simple averages of responses for all enterprises in a given region are presented. All indicators presented in the table are in per cent.

\* = Difference is statistically significant at 5 per cent level; \*\* = Difference is statistically significant at 1 per cent level; ~ = No statistically significant difference.

### ***Labour restructuring***

The last area of enterprise behaviour analysed in this paper relates to labour restructuring and improvements in the skills mix. Given high wage levels in East Germany one would assume that East German enterprises would devote extensive resources to improving the skills of their workforce to remain competitive. However, according to our survey data, this is not the case. East German enterprises are more likely than West German firms to have a formal training programme for only one category of workers – non-production workers in sales and administration, but this difference is not significant once we control for enterprise characteristics.

Interestingly, West German enterprises are just as likely as East German firms to have a formal in-company training programme for skilled and unskilled workers but they train on average a much higher share of their workforce per year, about five percentage points more for both categories of workers (although the difference is not significant for unskilled workers once we control for enterprise characteristics). Given the greater need for East German workers to adjust to modern working practices, one would assume that the opposite would be the case.

The most surprising finding from the survey data regarding labour restructuring is that central European enterprises are more likely than either East German or West German companies to have a formal training programme, and they are training a higher share of employees, indicating that central European enterprises do not rely only on low wages but also invest significantly in skills transfers.

Central European companies also have a smaller share of part-time employees than East German firms. This implies not only that any training provided to employees of East German firms has a lower rate of return (as the training provided to a part-time employee should be the same as the training for a full-time employee but acquired skills would be applied less often), but also that non-wage costs of labour in East Germany are higher, further lowering the competitiveness of East German firms compared to their central European counterparts.

Finally, the enterprises that took part in the survey were asked how they would change the number of regular full-time workers if no restrictions on hiring and firing, such as severance payments, applied. While enterprises in East and West Germany said they would, on average, lower the number of employees, central European firms said that they would increase their employment by almost 9 per cent. This indicates that relaxing labour market restrictions in themselves might not encourage German enterprises to create a large number of new jobs.

**Table 9 – Labour restructuring**

	West Germany		East Germany		Central Europe
Share of part-time employees	27.0	>**	21.4	>**	8.3
Change in the share of part-time employees over 36 months	2.8	~	2.5	>**	0.0
Share of firms providing formal training to skilled employees	32.7	~	31.9	<**	50.3
Share of firms providing formal training to unskilled employees	23.8	~	16.3	<**	40.7
Share of firms providing formal training to non-production workers	21.2	<* (~)	28.2	<** (~)	37.5
Percentage of skilled employees trained in past 12 months	15.4	>*	10.6	<**	39.0
Percentage of unskilled employees trained in past 12 months	9.8	>* (~)	4.7	<**	31.6
Percentage of other workers trained in past 12 months	11.8	~	8.9	<**	27.7
Potential employment change if labour restrictions did not exist	-1.5	~	-0.2	<**	8.7

Source: BEEPS 2004-05.

Notes: Simple averages of responses for all enterprises in a given region are presented. All indicators presented in the table are in per cent.

\* = Difference is statistically significant at 5 per cent level; \*\* = Difference is statistically significant at 1 per cent level; ~ = No statistically significant difference. Signs in the brackets refer to differences if they differ once we control for enterprise characteristics such as the location dummies (capital, rural and urban areas), ownership dummies (state, local private and foreign private), sector dummies (manufacturing, real estate, construction, trade, hotels and restaurants and transport) and size dummies (micro, small, medium and large).

## 5. DETERMINANTS OF ENTERPRISE PERFORMANCE

As the last part of our empirical analysis, we investigate the relationship between institutional indicators available in our survey data and enterprise performance measured by sales growth. Indeed, the existence of significant differences in both business environment and enterprise behaviour raises the question of how these differences are related to enterprise performance.

The analysis of enterprise performance is based on a standard Cobb-Douglas production function:

$$Y_t = A_t \cdot L_t^\alpha \cdot K_t^\beta \cdot H_t^{1-\alpha-\beta},$$

where  $Y$  is the output,  $A$  is total factor productivity,  $L$  is labour,  $K$  is capital, and  $H$  is human capital. For the empirical analysis we use a logarithmical approximation, separating total factor productivity into parts that can be attributed to country and enterprise differences (such as the size, ownership, location and sector), institutions and innovation, while skills (human capital) are approximated by the existence of formal training:

$$\log(\text{sales})_{i,t} = a_{i,t} + b_{i,t} \cdot \text{labour} + c_{i,t} \cdot \text{capital} + d_{i,t} \cdot \text{innovation} + e_{i,t} \cdot \text{skills} + f_{i,t} \cdot \text{institutions} + \varepsilon_{i,t}$$

where  $\varepsilon_{i,t}$  is a normally distributed i.i.d. random term,  $i$  is an enterprise index and  $t$  is the time index.

The measures of informal institutions related to enterprise behaviour (such as investments in innovation and training) are positively associated with sales growth, once we account for country differences and enterprise characteristics such as size, location, ownership and sector. These results are robust to the control for potential endogeneity, using instrumental variables similar to those used by Commander and Svejnar (2007). This implies that even in a business environment with inferior institutions, enterprises may perform well in terms of sales growth, as long as they focus on investments in innovation and human capital. Our analysis shows that these are precisely the areas where East German enterprises show the weakest indicators and central European enterprises the strongest.

Using the coefficients in the last regression, including the business environment indicators and estimated using instrumental variables, and the differences in institutional indicators highlighted in the previous sections, the empirical results indicate that if East German enterprises increased their innovation activities and training of employees to the level of central European enterprises, their growth could be higher by approximately 0.9 per cent a year. In addition, if East German enterprises invested in their fixed assets at the same rate as central European enterprises, their sales growth could be boosted by a further 0.9 per cent.<sup>9</sup>

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<sup>9</sup> The difference in sales growth between East German and central European enterprises in the survey is 3.3 per cent per year, with the former reporting sales growth at 2.2 per cent per year and the latter at 5.5 per cent per year.

**Table 10 – Sales growth: regression results**

	OLS	IV	OLS	IV	OLS	IV
Investment	0.43** (0.07)	0.43** (0.08)	0.41** (0.09)	0.43 (0.10)	0.41** (0.07)	0.39** (0.06)
Innovation	10.72** (3.53)	32.94** (10.27)	11.03** (3.73)	11.76 (9.35)	14.12** (4.05)	39.86** (11.05)
Training	1.96** (0.73)	2.66** (0.94)	2.37** (0.77)	0.39 (0.15)	1.97** (0.82)	2.76* (1.10)
Trust	0.01 (0.01)	-0.13** (0.02)	0.01 (0.01)	-0.07** (0.02)	0.02** (0.01)	-0.10** (0.02)
Perception of business environment	-	-	0.01 (0.03)	0.39** (0.15)	-	-
Frequency of corruption	-	-	-	-	-0.10 (0.08)	0.76 (0.43)
Predictability of corruption	-	-	-	-	0.78 (0.44)	2.17 (2.30)
Frequency of the use of courts	-	-	-	-	0.06 (0.08)	-0.37 (0.28)
Number of observations	2,676	2,329	2,173	1,916	1,969	1,741
F-statistic	23.11	37.42	19.98	33.32	17.64	21.15

Source: BEEPS 2004-05.

Notes: Investment is the growth rate of investments in fixed assets over the past three years; innovation is the share of six different restructuring measures undertaken in the past three years (developing new products, upgrading existing products, discontinuing old products, obtaining new product licensing agreements, obtaining new quality accreditations and obtaining new production technology); training is a dummy for the existence of a formal training programme; and trust is the share of trade credit extended to clients and suppliers. Instruments used in the instrumental variables (2SLS) regressions include the number of full-time employees; the share of the workforce with secondary and higher education; and the share of investments financed by retained earnings. The regressions also control for country level difference by the use of country dummies and for enterprise characteristics such as the location dummies (capital, rural and urban areas), ownership dummies (state, local private and foreign private), sector dummies (manufacturing, real estate, construction, trade, hotels and restaurants and transport) and size dummies (micro, small, medium and large). All regressions include a constant. The regression of perception of the business environment on frequency and predictability of corruption and use of the courts (all three variables have significant and positive coefficients), controlling for country and enterprise characteristics, is available on request.

\* = statistically significant coefficient at 5 per cent level; \*\* = statistically significant coefficient at 1 per cent level; and standard errors adjusted for heteroscedasticity are in the brackets.

In the regressions we have approximated the institutions by the frequency of corruption, predictability of corruption, how frequently courts are used to defend property rights and resolve commercial disputes, and trust, given that these indicators explain a large part of inter-country variation in the perception of the business environment (empirical results are available on request). We have tested a number of other institutional indicators but none of them proved to be significantly related to enterprise performance. The perception of the business environment had a significant coefficient in some instrumental variables regressions but these regressions suffer from multicollinearity since most of the variation in perception indicators is between countries, not within countries, and we have also included country dummies to capture between country differences (such as the impact of overall wage levels). This is a similar result to those reported by Commander and Svejnar (2007). They analysed

the relationship between enterprise characteristics, perception of the business environment and enterprise performance using a similar framework and advanced econometric techniques based on the full set of BEEPS data. They were unable to find robust evidence of a relationship between business environment constraints and performance. Indeed, Commander and Svejnar show that country fixed effects largely absorb the explanatory power of the perception of business obstacles.

## **6. SUMMARY AND CONCLUDING REMARKS**

The goal of this paper was to examine whether there are any significant institutional differences between East and West Germany and four central European transition countries on the basis of a unique Business Environment and Enterprise Performance Survey, and assess how these differences relate to enterprise performance. The analysis compared perceptions with more objective measures of the business environment to assess the quality of day-to-day operations of both formal and informal institutions. In addition, we have analysed inter-company relationships, as well as interactions between enterprises, the financial sector and labour markets.

Our examination of management perception, i.e., how a firm's management feels about the business-conduciveness of its environment, yields the overall result that firms in East Germany perceive the business environment as more problematic than their western counterparts. The perception of institutions as obstacles to business operations is worse in East Germany than in West Germany in all analysed areas (judiciary, public administration, corruption and access to finance or labour markets). While this result is in line with the literature, our analysis is based on unique survey data that enable us to directly compare enterprise experience with institutions in East Germany and in central European transition countries.

The differences in perception between East Germany and the four central European transition countries are not as great as between East and West Germany. Indeed, managers of East German enterprises see business obstacles in public administration, access to finance and labour markets in the same way as managers in central European companies. This leads us to an overall conclusion that former centrally-planned economies in central Europe might have closed most of the institutional gap with East Germany, but significant improvements are still necessary to fully catch up with a mature market economy in West Germany.

Due to their subjectivity we have compared perception indicators with more objective indicators of business environment, showing that there is a strong correlation between the perception of business obstacles and more objective business environment indicators. The comparison of objective institutional indicators confirms that there are statistically significant institutional differences between East and West Germany not only in perceptions but also in more impartial indicators. In line with the results of Rainer and Siedler (2006) we find several indications for a less trustful business environment in East Germany compared to West Germany. For instance, a more frequent of East German firms in courts, both as plaintiffs and as defendants, might indicate a higher number of cases in which the parties involved were unable to resolve conflicts and agree out of court, which points towards less developed informal institutions.

Moreover, we find that for East German enterprises, access to finance is a bigger business obstacle than for West German enterprises, mainly due to the much higher rate at which their loan applications are turned down, despite the fact that if they eventually receive a bank loan their terms and conditions are better than those of surveyed enterprises in other regions.

In our comparison of objective business environment indicators, the central European countries still rank lowest in terms of institutional quality. Central European enterprises experience overdue payments the most often and their resolution takes the most time. They also spend most time with public officials discussing the interpretation of laws and regulations, they have to pay higher bribes more often and they face the worst terms and conditions of bank loans. These institutional deficiencies seem to be well entrenched as central European companies also know better than their counterparts in Germany when and how much they have to pay in bribes.

The analysis of enterprise behaviour in relation to institutional deficiencies provides some interesting results. Although access to finance is most difficult in central Europe, enterprises in this region are more likely to report that they do not need external finance and prefer to use a higher share of profits for investments. Enterprises in central Europe are also most active in investing in their businesses, be it fixed assets, innovation in terms of changing the product mix or training employees, while companies in East Germany are least active in these areas. The difference in West Germany might be explained by a lack of innovation networks at the disposal of East German companies in competition with West Germany. However, this interpretation does not explain why managers in East German companies do not change the product mix by dropping old products and acquiring new technologies as much as their counterparts in West Germany or central Europe.

The analysis of the relationship between performance measured by sales growth and institutional indicators, in the framework of a standard Cobb-Dougllass production function, shows that enterprise performance is strongly associated with the differences in enterprise behaviour. Once we control for country differences and enterprise characteristics, such as size, location, ownership and the sector, sales growth is positively related to investments in innovation and training of employees. In line with the literature (Commander and Svejnar 2007) we could find no significant relationship between enterprise performance and within-country differences in the business environment, which may indicate that indeed the impact of the business environment is captured by country dummies. One potential interpretation of these results is the ability of enterprises to compensate for a weak country-level institutional environment by investing heavily in new products and processes as well as human capital, which may partially explain why central European enterprises perform well despite a much weaker business environment, even if we control for country differences, such as the wage level.

The results of our paper provide a key policy implication: reform of informal institutions seems to have been as difficult in East Germany as it was in central European transition countries. However, enterprises in central Europe made a significant effort to compensate for an inferior business environment by investing in innovation and human capital, boosting their competitiveness. Enterprises in East Germany should therefore focus more on investing in new products and processes and train a higher share of their workforce more efficiently than

they do at the moment to increase their competitiveness and help the East German economy converge with West German levels.

We acknowledge that further research is needed to ensure that the empirical results presented in this paper are sufficiently robust. The available data do not provide us with time series to assess the impact of changes in enterprise behaviour and the business environment but only allow static analysis. A repetition of the enterprise survey would enable the creation of a panel data, which would allow the use of more elaborate econometric modelling. Potential endogeneity of the links between various indicators would also benefit from further investigation, including thorough analysis of all potential links between enterprise behaviour and the business environment. Finally, the impact of policy changes and targeted subsidies deserves careful attention from researchers in the future.

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