CHAPTER 3

The Business Environment

The business environment is widely acknowledged as an important determinant of firm behavior.[1] Detailed information on key aspects of the business environment comes from the EBRD-World Bank Business Environment and Enterprise Performance Surveys (BEEPS), which have been implemented for virtually all the transition countries of Eastern Europe and the former Soviet Union in 1999, 2002, and 2005. The survey was extended to cover Germany and the cohesion countries, as well as Korea and Vietnam, in 2004 and 2005.[2] Survey samples were constructed by random sampling from a national registry of firms or equivalent, with oversampling of some additional categories of firms to ensure reasonable subsample sizes. The firms covered are drawn from industry and services. As with the population of firms everywhere, firms in transition countries are mostly small and medium, and a majority (60 percent in 1999, rising to 75 percent in 2005) are de novo firms—those that were always private. Privatized firms make up about 15–25 percent of the sample, and the remaining 10–15 percent are state owned, with both proportions falling over time. The BEEPS samples from West Germany and the cohesion countries have very few privatized and state-owned firms.

Tthis chapter is based on Mitra, Muravyev, and Schaffer (2008).

Enterprise managers in the Business Environment and Enterprise Performance Surveys (BEEPS) report that the business environment—comprising the seven broad areas in the surveys, business regulation, labor, taxation, institutions and property rights, infrastructure, finance, and the macroeconomic environment—steadily improved in the transition countries between 1999 and 2005 but remains mostly more difficult than in developed market economies. The main exceptions are labor regulations, which are seen as more of an obstacle in the developed market economies.[3]

This chapter analyzes how two key elements of the business environment, viz, (a) competition and market structures and (b) finance and the structure of lending have developed between 1999 and 2005 and how they compare with the same elements of the business environment in West Germany and the cohesion countries in 2004/2005. Firms respond to the business environment by undertaking a number of activities, all falling under the rubric of deep restructuring, which include adopting new products and processes, upgrading old products and processes, licensing technology, improving organizational efficiency, and certifying quality. These are typically the activities associated with innovation, which develops knowledge new to the world, and absorption of knowledge, which requires integrating and commercializing knowledge new to the firm but not to the world. This chapter also identifies the correlates of such restructuring in transition and developed market economies.

Competition and Market Structure

The BEEPS contain several measures of competition. A first measure is the number of competitors an enterprise faces in its product or service lines in the domestic market: none (monopoly), 1 to 3 (oligopoly or rivalry), or 4 or more (competitive). Competition in transition economies increased between 1999 and 2002. In 2005 it was similar to but slightly below that in the cohesion countries and West Germany (table 3.1). These results hold when the analysis controls for such firm characteristics as size and industry, and they hold across country groups. The similar degree of competition in the transition economies in 2002 and 2005 might reflect how the question was asked in 2005, when firms were asked separately about domestic and foreign markets. The 2004 and 2005 surveys asked a retrospective question about competition faced three years earlier. The responses suggest, if anything, a further catching up of the transition economies

TABLE 3.1

Market Structure—Number of Competitors

(Percentage of firms)

	None (monopoly)	1 to 3 (oligopoly or rivalry)	4 or more (competitive)
Transition economies			
1999	9.6	12.7	77.7
2002	1.4	16.9	81.7
2005	4.0	14.3	81.7
West Germany and cohesion countries			
2004–05	1.4	13.8	84.8

Source: Mitra, Muravyev, and Schaffer 2008.

to competition in West Germany and the cohesion countries. Of the firms facing moderate competition in 2002 (1–3 competitors), 34 percent in the transition economies stated they faced strong competition (4 or more competitors) in 2005, compared with 22 percent in the developed market economies. Of the firms that faced strong competition in 2002, 18 percent in transition economies said they faced less competition in 2005, compared with 15 percent in the developed market economies.

Firms generally reported more intense competition across all transition country regions between 2002 and 2005. In 2005 the environment was the least competitive in the low income CIS countries and the most in the EU8 and the cohesion countries. The fastest change in market structure occurred in the middle income CIS countries, followed by the Southeastern European countries and the low income CIS countries, most likely due to new firms filling market niches where competition was low. The EU8 countries were fairly close to the cohesion countries in market structure.

A second measure of competition is the price elasticity of demand facing firms. Managers were asked what would happen to demand if they were to increase the price of their product by 10 percent. The available responses ranged from customers continuing to buy from them in the same quantities (inelastic), slightly lower quantities (slightly elastic), or much lower quantities (elastic), and many customers buying from the firms' competitors instead (very elastic). Less elastic demand may be seen as a measure of the resources that can accrue to a firm without being competed away in markets where the firm enjoys some monopoly power. The overall price elasticity during the period of 1999 through 2005 in the transition economies is similar to that in the developed market economies (table 3.2). Firms in transition economies in 1999 reported facing elasticities of demand slightly higher than the market economy benchmark (the developed

TABLE 3.2

Price Elasticity of Demand

(Percentage of firms)

	1 (low)	2	3	4 (high)
Transition economies				
1999	14.3	25.2	25.0	35.5
2002	19.9	30.5	17.9	31.7
2005	22.5	30.6	18.5	28.7
West Germany and cohesion countries				
2004–05	15.5	26.7	26.3	31.5

Source: Mitra, Muravyev, and Schaffer 2008.

market economies in 2005); and in 2005, elasticities of demand slightly lower.

The intensification of firm perceptions of monopoly power during a period when the number of competitors faced in product markets is reported to have increased appears counterintuitive. It can be explained by the business cycle rather than the business environment. In a macroeconomic recovery the number of competitors stays the same but demand grows, which is perhaps perceived as less elastic demand. Two findings lend support to this view. First, capacity use reported by firms in the surveys, which is highly correlated with the business cycle, is somewhat (negatively) correlated with firm-reported price elasticity of demand. That is, higher capacity use is associated with lower reported price elasticity of demand, but there is no evidence of a correlation between the number of competitors and capacity use. Second, country patterns suggest a relationship between macroeconomic performance and changes in the elasticity of demand. Thus, enterprise managers in the Russian Federation and Ukraine, both of which grew rapidly during this period, report falling elasticities of demand, while those in Uzbekistan, which saw relatively slower growth, report rising elasticities. Hence, the substantial macroeconomic recovery in much of the region may account for a decline in firm-reported price elasticity of demand.

A third set of measures of competition have to do with firms' assessment of their importance. The perceived competition from imports in firms' main product or service market in transition economies in 2002 and 2005 was broadly comparable to what enterprise managers in developed market economies reported in 2005 (table 3.3). The variation across transition country groups arises from country size, which reflects the size of the domestic market and the scale of domestic competition. Imports are generally less important in large countries. Of firms in the cohesion, EU8, Southeastern European, and low income CIS countries, 11–14 percent reported compe-

TABLE 3.3

Importance of Foreign Competition

(Percentage of firms)

	1 (low)	2	3	4	5 (high)	n.a.
Transition economies						
2002	29.7	13.1	22.6	19.1	9.9	5.7
2005	28.5	15.4	20.7	18.7	10.0	6.8
West Germany and cohesion countries						
2004–05	27.3	14.7	19.3	20.4	11.8	6.5

Source: Mitra, Muravyev, and Schaffer 2008.

n.a. = Not applicable; products cannot be imported.

tition from imports as being high in 2005. The corresponding figure for West Germany and the middle income CIS countries, most of them Russian firms, was only 5 percent. While 51 percent of Russian firms reported pressure from imports as insignificant, the figure was only 38 percent for the other middle income CIS countries—Belarus, Kazakhstan, and Ukraine.

What about pressure from foreign competitors, domestic competitors, and customers as a spur to "developing new products or services or markets" and "reducing the production costs of existing products or services"? Pressure from foreign competitors to restructure has always been important in the transition economies, broadly similar to that in the developed market economies (table 3.4). The strongest pressure—indeed higher than for the developed market economies—is in the EU8 and Southeastern European countries. It is much less important in the CIS countries that are farther from the most important advanced market: the European Union. Because productivity and product quality tend to be low in those countries, domestic producers can occupy niches less exposed to international trade. Pressure

TABLE 3.4

Pressure from Foreign Competitors

(Percentage of firms)

	To develop new products			To reduce costs		
Group	1999	2002	2005	1999	2002	2005
West Germany	—	—	1.85	—	—	1.90
Cohesion	—	—	2.03	—	—	2.03
EU8	2.34	2.20	2.21	2.28	2.14	2.19
Southeastern Europe	2.29	2.16	2.23	2.29	2.14	2.23
Middle income CIS	1.66	1.80	1.70	1.59	1.72	1.65
Low income CIS	1.82	1.90	1.81	1.78	1.84	1.74

Source: Mitra, Muravyev, and Schaffer 2008.

Note: Firms were asked about the importance of pressure from foreign competitors in "developing new products"or "reducing costs". Score range: 1 (not at all important), 2 (slightly important), 3 (fairly important), 4 (very important).

— indicates that data are unavailable.

to restructure from foreign competitors is less important in the middle income CIS countries than in the low income CIS countries, reflecting the minor role of import competition even for a large country such as the Russian Federation.

Managers in all country groups report pressure from domestic competitors and customers to develop new products and reduce costs as being more important than that from foreign competitors (tables 3.5 and 3.6). It varies less across transition country groups than for foreign competition. It is strongest in the EU8 countries and lowest in the CIS countries. Southeastern Europe is in between, occupying a position similar to the cohesion countries for pressure from domestic competitors, and to West Germany and the cohesion countries for pressure from customers. The pressure from domestic competitors to

TABLE 3.5

Pressure from Domestic Competitors

(Percentage of firms)

Group	To develop new products			To reduce costs		
	1999	2002	2004/05	1999	2002	2004/05
West Germany	—	—	3.08	—	—	3.06
Cohesion	—	—	2.87	—	—	2.81
EU8	2.84	3.02	3.10	2.77	2.96	3.05
Southeastern Europe	2.84	2.74	2.97	2.83	2.68	2.94
Middle income CIS	2.31	2.69	2.70	2.24	2.62	2.63
Low income CIS	2.31	2.50	2.56	2.21	2.40	2.47

Source: Mitra, Muravyev, and Schaffer 2008.

Note: Firms were asked about the importance of pressure from domestic competitors in "developing new products"or "reducing costs". Score range: 1 (not at all important), 2 (slightly important), 3 (fairly important), 4 (very important).
— indicates that data are unavailable.

TABLE 3.6

Pressure from Customers

(Percentage of firms)

Group	To develop new products			To reduce costs		
	1999	2002	2004/05	1999	2002	2004/05
West Germany	—	—	3.07	—	—	2.91
Cohesion	—	—	3.12	—	—	2.98
EU8	3.01	3.16	3.28	2.87	3.05	3.20
Southeastern Europe	2.65	2.92	3.10	2.57	2.81	3.00
Middle income CIS	2.36	2.88	2.68	2.25	2.72	2.58
Low income CIS	2.30	2.59	2.51	2.21	2.52	2.43

Source: Mitra, Muravyev, and Schaffer 2008.

Note: Firms were asked about the importance of pressure from customers in "developing new products" or "reducing costs". Score range: 1 (not at all important), 2 (slightly important), 3 (fairly important), 4 (very important).
— indicates that data are unavailable.

restructure has, however, been generally increasing, unlike that from foreign competitors, which did not change much during this period.

The pressure to develop new products and reduce costs shows some convergence with developed countries. The EU8 countries are farthest along in the process, followed by the Southeastern European and CIS countries. Foreign competition was always present, but firms at the beginning of the transition could occupy niches that were thin or nonexistent in the planned economy and avoid domestic competition. Not many domestic firms could challenge foreign competition in the early years of transition. But domestic competition became more important as countries proceeded toward a market economy.

Finance and the Structure of Lending

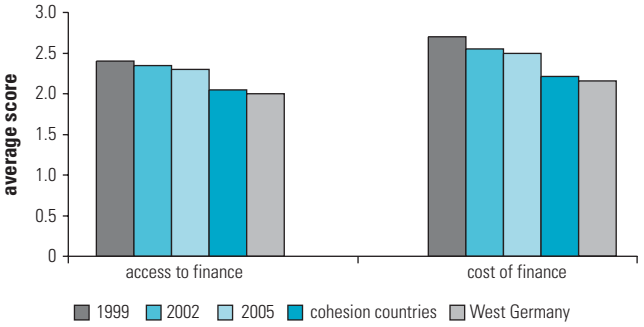
Firms in developed market economies report fewer problems in finance—as regards cost and access—than those in the transition economies, where problems are most pronounced in the low income CIS, less in the middle income CIS and Southeastern European countries, and least in the EU8, declining between 1999 and 2005 (figures 3.1 and 3.2). Cost is seen as more of a problem than access. Large firms, firms in major cities, and foreign-owned firms report fewer obstacles to obtaining finance. This is similar to the pattern in developed market economies, except that there is no difference in the developed group between major cities and other parts of the country. The pattern in transition countries thus reflects the incomplete within-country integration of the financial sector.

Privatized and de novo firms in the transition economies face higher costs of credit than do state-owned firms. Smaller firms pay more, while those in majority foreign-owned firms and in big cities pay less. Small firms face more difficulty in getting finance, while those in big cities and majority foreign-owned firms face less. Higher performing firms use external finance more often, enjoying lower costs and longer maturities. The maturity of loans is longer in the cohesion countries and West Germany, followed by the EU8 countries. The costs of loans declined between 1999 and 2005, approaching those in the developed market economies.[4]

The focus here is on financing fixed investment—to explore whether finance enables restructuring and productivity growth in firms. Retained earnings are the most important source of finance for fixed investment in both developed market economies and the transition country groups (table 3.7). West Germany relies less on internal financing than the cohesion countries because of formal capital mar-

FIGURE 3.1

Financial Constraints

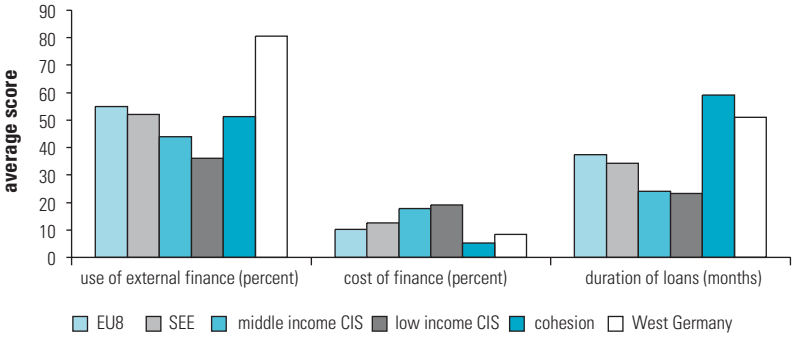


Source: BEEPS 1999, 2002, 2004, and 2005.

Note: Firms were asked to report how problematic different factors were to their operation and growth. Scores ranged from 1 (no obstacle) to 4 (major obstacle). Data correspond to BEEPS undertaken in transition countries in 1999, 2002, and 2005 and in cohesion countries (Greece, Ireland, Portugal, and Spain) and West Germany in 2004/05.

FIGURE 3.2

Regional Differences in Access to Finance



Source: BEEPS 2004 and 2005.

Note: The chart reports the use of external finance (percentage of firms), the average interest rate on existing loans (in percent), and the average maturity of the last loan (months) in transition countries in 2005, and cohesion countries (Greece, Ireland, Portugal, and Spain) and West Germany in 2004.

TABLE 3.7

Sources of Financing, 2004–05

	Retained earnings	Equity	All banks	Of which: State banks	Family	State[a]	Leasing	Other
West Germany	49.1	9.7	23.0	3.9	0.6	0.2	12.1	5.1
Cohesion	61.3	2.6	20.0	3.1	1.1	0.6	9.4	5.1
EU8	63.0	6.4	13.7	2.8	2.2	1.1	7.4	6.3
Southeastern Europe	71.9	0.5	16.1	1.4	3.2	1.1	2.7	4.6
Middle income CIS	76.9	3.4	10.0	2.0	2.8	1.4	1.7	3.9
Low income CIS	79.8	0.3	11.1	0.8	3.7	1.8	0.3	3.1

Source: Mitra, Muravyev, and Schaffer 2008

Note: Bank financing includes state banks.
a. State refers to nonbank financing (grants and subsidies, for example; see footnote 22).

kets, with both bank and equity financing. The EU8 countries resemble the cohesion countries both in retained earnings and in formal capital markets, except that equity offers are more important than bank financing in the EU8. Overall, the reliance on retained earnings and capital markets is related to income, with the former increasing and the latter decreasing for the poorer country groups. The role of state banks is somewhat smaller in the transition countries than in the developed market economies. State banks do not appear to be a conduit for the soft budget constraint, at least for the most part.

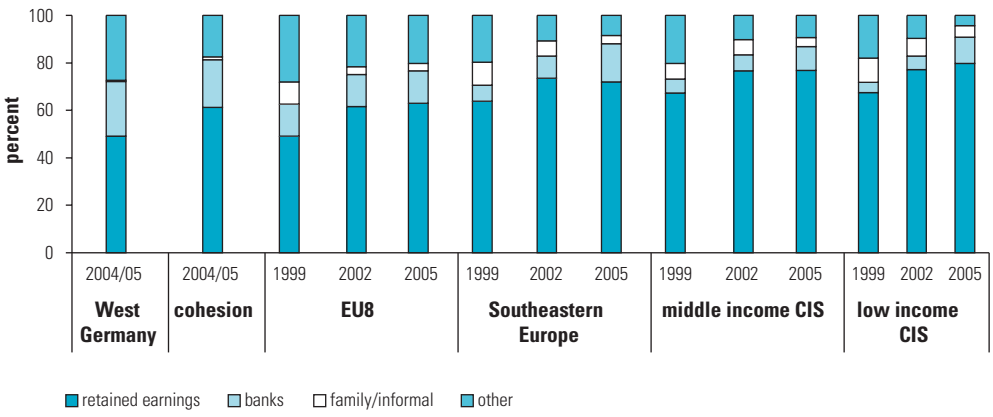
Reliance on retained earnings in all subgroups of transition countries has been increasing, so their structure of financing has not been converging to that in the developed market economies (table 3.8 and figure 3.3). This is not because of a decline in the role of banks, which remained stable in the EU8 countries and actually increased for the remaining transition country groups. Equity financing has been generally small and declining over time. The greater reliance on retained earnings instead reflects a decline in loans from family, friends, and money lenders. It thus represents maturing financial and business sectors in the transition countries, not a decline in the institutions of formal finance.

Regression analysis relating the shares of the various sources of finance to firm characteristics such as ownership, export activity, location, size, and sector in both developed market economies and transition economies shows that:

- Large firms rely more on bank financing and less on retained earnings.

FIGURE 3.3

Evolution of Financing for Fixed Investment



Source: Mitra, Muravyev, and Schaffer 2008.

Note: Equity finance is small in the transition countries and is absorbed in "other."

TABLE 3.8

Evolution of Financing, 1999–2005

	Retained earnings			Banks			Equity			Family/informal		
	1999	2002	2004/05	1999	2002	2004/05	1999	2002	2004/05	1999	2002	2004/05
West Germany			49.1			23.0			9.7			0.6
Cohesion			61.3			20.0			2.5			1.3
EU8	49.1	61.6	63.0	13.6	13.5	13.7	10.5	5.4	6.4	9.3	3.3	3.0
Middle income Southeastern Europe	63.8	73.5	71.9	6.8	9.4	16.1	8.5	1.6	5.0	9.6	6.4	3.5
Middle income CIS	67.3	76.6	76.9	5.9	6.8	10.0	1.6	0.8	3.4	6.5	6.4	3.7
Low income	67.5	77.1	79.8	4.3	5.8	11.1	1.1	0.3	0.3	10.2	7.4	4.8

Source: Mitra, Muravyev, and Schaffer 2008.

Note: Banks include state-owned banks.

- Foreign-owned firms rely less on bank financing and more on retained earnings, presumably because foreign owners can make finance available through equity injections.[5]
- Exporters rely more on external financing, including both banks and equity.

These stylized facts help in comparing the structure of financing for fixed investment across subgroups of countries, by ownership categories and over time. The BEEPS allow comparisons of the structure of financing of firms along three dimensions: country groups, ownership, and time periods.

Comparisons across country groups are confined to developed market economies, where most firms are privately owned, and to private—privatized and de novo; i.e., always private—firms in the transition economies in 2005. Private firms in the transition countries are substantially larger, less concentrated in manufacturing, and more likely to be in big cities than private firms in the developed market economies. The impact of size, per the analysis reported above, would have transition economy firms rely more on external finance and less on retained earnings. In fact, however, private firms in the transition economies resort much more to retained earnings and to family and informal sources—much less to external finance (figure 3.4).

These differences do not arise from observed firm characteristics such as size (number of employees), sector (manufacturing or services), location (big cities or elsewhere), export orientation and majority ownership (domestic or foreign-owned), referred to as "endowments" (figure 3.5). Nor do they arise particularly on account of differences in the underlying relationship linking those characteristics and the structure of finance between developed market

FIGURE 3.4

The Structure of Finance for Fixed Investment in Private Firms in Transition Economies and Developed Market Economies, 2005

Source: Mitra, Muravyev, and Schaffer 2008.

FIGURE 3.5

Decomposition of Difference in the Structure of Financing for Fixed Investment between Transition Economies and Developed Market Economies

Source: Mitra, Muravyev, and Schaffer 2008.

economies and transition economies, referred to as "coefficients". Instead they are due to "autonomous" factors having to do with the maturation of the business and financial sectors in the transition economies (figure 3.5).

This supports the view that the relationship between firm characteristics and financing is similar in the developed market economies and the transition economies.

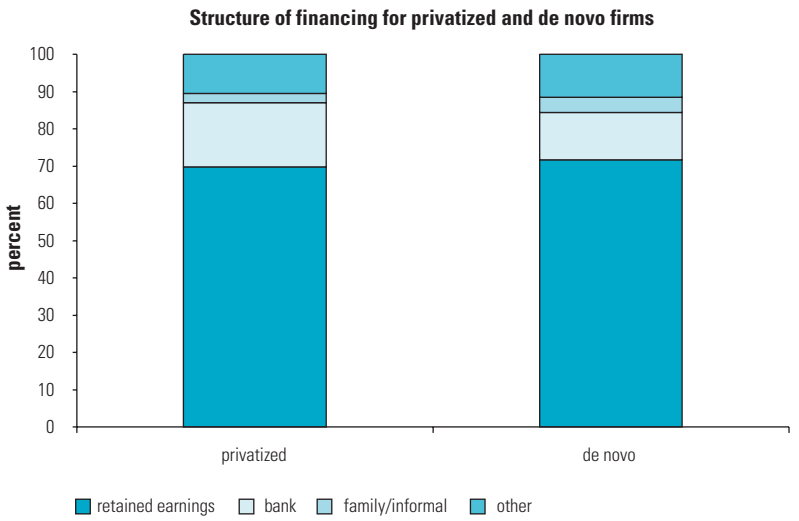
Comparisons across ownership categories are done for privatized firms and de novo firms in transition economies in 2005. The structures of financing for the two categories of firms are quite similar. Privatized firms, on account of their larger size, rely more on bank financing and less on retained earnings than do de novo firms. Both types of firms are equally likely to use informal sources of finance (figure 3.6).

Comparisons over time are done for de novo firms in 1999 and 2005. De novo firms in 2005 are smaller than in 1999 and less likely to be in manufacturing and big cities. The impact of smaller size would suggest greater resort to informal finance and less reliance on retained earnings and banks in 2005 than in 1999. In fact, the structure of financing in 2005 relied much more on retained earnings and on banks and less on informal finance (figure 3.7). This is a process of maturation that is owed not so much to firm characteristics or their impact on financing, but to autonomous factors.

Together, these three comparisons support convergence: (i) de novo firms have matured during 1999 to 2005, in that they rely less on family and informal financing and more on retained earnings, like

FIGURE 3.6

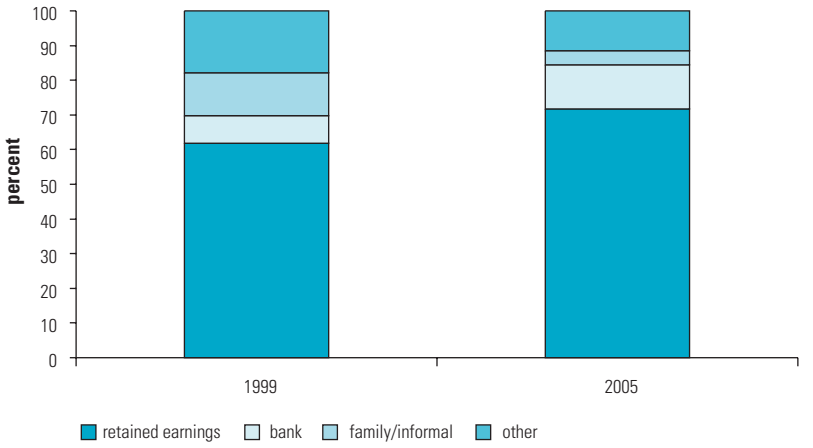
The Structure of Finance for Privatized and De Novo Firms, 2005



Source: Mitra, Muravyev, and Schaffer 2005.

FIGURE 3.7

The Structure of Finance for De Novo Firms, 1999 and 2005



Source: Mitra, Muravyev, and Schaffer 2005.

privatized firms; (ii) that de novo firms in transition economies have become more like privatized firms; and also (iii) more like firms in developed market economies with regard to how their characteristics relate to the structure of financing for fixed investment.

Restructuring in Firms

Firms are asked about a number of restructuring activities that are typically associated with innovation and knowledge absorption in the BEEPS surveys. They are:

- Developing a major new product line or service in the preceding three years.
- Upgrading an existing product line or service in the preceding three years.
- Obtaining a new product licensing agreement in the preceding three years.
- Obtaining a new quality accreditation (such as ISO 9000) in the preceding three years.
- Discontinuing at least one product line in the preceding three years.

The first two measures—developing a new product line or service and upgrading an existing product line—are thought of as indicators

of deep restructuring. But discontinuing a product line can also be associated with deep restructuring: reorienting product lines often involves simultaneous exits from some markets and entries into others. The proportion of firms developing a major new product or service line is 10 percentage points higher in the EU8 and 15 percentage points higher in the poorer transition country groups than in the developed market economies in 2005 (table 3.9). This is because the proportion of micro firms, i.e., those employing 1-9 workers, in the developed market economies is much higher: 46 percent in West Germany and 56 percent in the cohesion countries, compared with 25–28 percent in the CIS countries (see figure 4.5). And smaller firms, because they have fewer products and product lines, innovate less. The difference among the country groups is more modest for upgrading and negligible for discontinuing product lines. This is consistent with a pattern of catching up and converging to the scale of restructuring in developed market economies: developing a new product or service line can also be expected to decline as the size distribution of firms moves toward that in developed market economies.

The percentage of firms involved in all three measures of restructuring has an inverted U shape over time—lower in 1999, higher in 2002, and lower again in 2005 (table 3.9). Except for the EU8, the level in 2005 is higher than in 1999. Regression analysis on the three years of data, controlling for firm size, sector ownership, and location and competition confirmed intensified restructuring during 1999–2002 compared with 1996–99 in all transition country groups. It also confirmed decelerating restructuring during 2002–05 compared with 1999–2002 in the EU8 and Southeastern Europe but, depending on the index of restructuring chosen, either a decline or no significant change in the middle income and low income CIS. This was the case when the index of restructuring was a composite of

TABLE 3.9

Deep Restructuring, 1999–2005

	Percentage of firms reporting that they								
	Developed new product or service			Upgraded existing product or service			Discontinued a product line or service		
	1999	2002	2004/05	1999	2002	2004/05	1999	2002	2004/05
West Germany	—	—	21	—	—	53	—	—	15
Cohesion	—	—	27	—	—	36	—	—	15
EU8	33	35	31	45	50	47	17	22	17
Southeastern Europe	23	44	36	39	56	54	7	15	15
Middle income CIS	33	41	38	36	53	56	16	21	15
Low income CIS	24	36	38	24	47	45	13	23	15

Source: Mitra, Muravyev, and Schaffer 2008.

— indicates that data are unavailable.

development of a new product or service and upgrade of an existing product or service, as well as when the index was the development of a new product or service. Finally, the regression analysis found that even where there was a deceleration in restructuring activity during 2002–05, it was smaller than the acceleration that had preceded it during 1999–2002. Hence, restructuring during 2002–05 continued at a higher level than during 1996–1999.[6]

One explanation for the patterns observed in developing, upgrading, or discontinuing a product or service might be that countries saw a burst of restructuring in the course of recovery from the nadir of the transitional recession in 1998 for the CIS and from the end of the Balkans wars for the Southeastern European countries. Restructuring then either remained flat or fell back during 2002–05, but to levels still higher than before 1999.

Even with these explanations, the common timing of the restructuring peak in 2002 across all country groups is a surprise. The expectation was that the early reforming countries would have peaked earlier than those less advanced in the transition. But the example of new product development illustrates that the CIS was restructuring in 2002–05 at the same elevated level as in 1999–2002. To that extent, it had not fallen back from a peak, unlike the EU8 and Southeastern European countries. This is broadly consistent with a convergence story.

What Determined Restructuring?

The data from the 2005 BEEPS for developed market and transition economies were used to examine how much deep restructuring activity in firms is associated with certain key elements of the business environment and firm characteristics: competition (number of competitors, firm-reported price elasticity of demand, and various sources of pressure on firms to restructure), finance (access to a bank loan, or more generally to external finance), ownership category (de novo, privatized, or state-owned, whether majority domestic or foreign owned), size (number of employees), location (whether or not in big cities), and export orientation. The results are as follows.[7]

Larger firms undertake more restructuring in developed market economies and all transition country groups. The explanation, as previously noted, is that larger firms have more products and product lines and therefore more opportunities for restructuring.

De novo firms are most active in restructuring and state-owned firms significantly less so in all transition country groups, with privatized firms in between. But the differences are not huge.

Exporters engage in more deep restructuring than nonexporting firms in all transition country groups and in the cohesion countries. There is a robust association in the transition countries between various measures of access to international knowledge—such as whether or not the firm is an exporter, the percentage of sales exported, the percentage of sales to multinational corporations, and whether the firm is a joint venture with a multinational corporation—and deep restructuring activities in firms.[8]

Firms in big cities restructure more than those elsewhere, but only in the CIS countries, likely reflecting incomplete spatial integration in countries less advanced in the transition.

Pressures to innovate influence deep restructuring by firms. But the sources of pressure vary systematically across country groups. Competitive pressure from domestic competitors is a spur to deep restructuring in West Germany and the cohesion countries. It generally has no such effect in the transition economies, where the pressure comes exclusively either from foreign competition or—in all transition country groups—from customers. This is consistent with the view that transition economies are followers: in the developed market economies domestic competition is perceived as more of a competitive threat than in the less developed transition economies. But as noted earlier, domestic competition grows with progress in transition.

The impact of firm-reported price elasticity of demand on deep restructuring is a priori ambiguous. Highly elastic demand corresponds to a very competitive market structure and, if competition leads to restructuring, should lead to a positive correlation between elastic demand and restructuring. But inelastic demand could be brought about through temporary monopoly power resulting from successful innovation, or the profits from monopoly could finance restructuring. Analysis of the BEEPS data shows that the latter situation predominates: less elastic demand is associated with more restructuring in both developed market and transition economies.

Competition, measured by the number of competitors a firm faces in the market for its product or service line, has no significant impact on deep restructuring. This might reflect the fact that the transition economies have become more like market economies. In the latter, it is more likely that restructuring activities shape market structure, just as market structure affects restructuring.[9] In such a situation, the absence of market power could lead firms to undertake fewer activities associated with innovation and knowledge absorption since the resulting benefits could be competed away by free entry. But less restructuring could itself reduce a firm's market power. Such reverse causality would underestimate the measured influence of the num-

ber of competitors on restructuring and this is consistent with the result observed in the BEEPS data. Thus the lack of impact of market structure on restructuring is consistent with its convergence to that prevailing in a market economy.

Both complete lack of access to external finance as well as partial access to external finance, represented by the unavailability of a bank loan, are associated with less restructuring. The quantitative impact of the absence of a bank loan on restructuring is broadly similar for the transition countries and the cohesion countries. Finance clearly enables the restructuring necessary for productivity growth within firms.

Measures of human capital, such as the share of university-educated workers in the firm's labor force or the existence of a training program provided by the firm, are positively associated with deep restructuring as well.

The analysis show that competition and finance as well as openness are important correlates of restructuring. Human capital is significantly associated with restructuring as well. There are many of the attributes of the business environment that were identified in Chapter 2 as enabling productivity growth.

Endnotes

1. EBRD (2005), World Bank (2005d).
2. The surveys in 2005 for the transition countries and for West Germany and the cohesion countries in 2004/05, together covered over 12,000 firms.
3. World Bank (2006a) analyzes corruption in the transition economies based on the three rounds of the BEEPS and the 2004/2005 round in West Germany and the cohesion countries. It finds broad progress between 1999 and 2005, while noting that corruption in the transition countries is generally worse than in Western Europe.
4. The summary in this paragraph is taken from EBRD (2005).
5. The 1999 BEEPS does not separately identify bank financing from state banks. So to ensure consistency across surveys, bank financing here includes state banks. But bank financing from state banks was small in 2002 and 2005. The state financing that is separately identified in the analysis is nonbank financing, such as grants and subsidies.
6. Different composite indexes used to measure restructuring are (1) the average of new product and upgrade (the two-indicator deep restructuring index) and (2) the average of new product and upgrade, new licensing, and new accreditation (the four-indicator deep restructuring index). Restructuring activity does not show a significant decline after 2002 in the CIS groups if the two-indicator deep-restructuring index is used to measure it, or if only new product development is used.

7. The measure of deep restructuring used in this analysis is a composite of the following measures: (i) developing a new product/service line, (ii) upgrading an existing product/service line, (iii) obtaining a new product licensing agreement, and (iv) obtaining a new quality accreditation. Other measures of restructuring yield similar results.
8. World Bank (2008b).
9. Carlin, Schaffer, and Seabright (2005), using the BEEPS 1999 dataset, found that there was an effect from competition in CIS countries, where market structure had not yet adjusted to that typical of a market economy, but not in Central and Eastern European countries, where the authors hypothesized that it had. The analysis reported here is based on the BEEPS data from 2005, when market structure in the CIS could be expected to have adjusted as well, just as it had earlier in Central and Eastern Europe. In that case there would be no effect in any of the country groups, which is the result reported in the chapter.