

### 3. ENTERPRISE SECTOR STRUCTURE AND PERFORMANCE

#### A. INTRODUCTION

3.1 **As the chapter on macroeconomic issues suggests, the low level of domestic savings in Bosnia and Herzegovina (BH) reflects in part disappointing corporate performance. Establishing a favorable investment climate is central to reversing the recent slowdown of output expansion and building a basis for sustainable growth.** This will require the creation of an enterprise sector motivated to prosper by utilizing the opportunities offered by BH's trade regime, as emphasized in the chapter on trade. A major policy challenge for the authorities is to create an incentive structure for new firms to enter and loss-making firms to exit the BH economy. The objective should be to ensure vigorous inter-enterprise competition takes place and the absence of opportunities for monopoly power. To achieve these goals, the government needs to provide the proper incentives and market signals by reforming its own actions.

3.2 **To understand the sources of the weak performance in BH's enterprise sector, it is important to analyze the underlying institutional fabric of the country's business environment.** Thus, we organize this chapter as follows. Section B reviews in detail the structure and characteristics of BH's enterprise sector. In Section C, several dimensions of the competitive performance of businesses are analyzed. The chapter concludes by presenting the results of an econometric analysis of the determinants of firm performance in BH, which provides insights that set the stage for the analysis of the impediments to business development and growth that is the focus of Chapter 4.

#### B. CHARACTERISTICS OF THE ENTERPRISE SECTOR IN BH

3.3 Our analysis of the enterprise sector in BH distinguishes between the formal and the informal sectors. Within the formal sector, we look at domestic and foreign firms. For the informal sector, we present available data on its size and characteristics and put it in a regional perspective. We then discuss the extent of the international integration of BH's businesses.

##### **The Formal Sector**

###### *Domestic firms*

3.4 **Sectoral and Size Attributes.** The majority of registered firms in BH operate in the services sector, which accounted for roughly two-thirds of GDP in 2003 (Table 3.1). Moreover, most of the country's businesses are of a small or medium size.

3.5 **Firms in agriculture and agro-processing are stagnating, and overall agricultural output has been declining.** The agricultural infrastructure is outdated and poorly integrated, and the quality of products is poor. Firms struggling to comply with sanitary and phytosanitary standards are unable to utilize their export potential. In addition, uncertainties regarding land ownership further constrain the development of the agricultural sector. There is an abundance of unused land in both Entities: 50 percent of arable land in the FBH and 30 percent in the RS (European Commission, 2003).

3.6 **The structure of the industrial sector in BH is quite different from that of the other former Yugoslav republics, remaining dominated by a small number of very large companies (Combinats) with many lines of business.** The war affected the operation of these industrial giants as production collapsed. Industrial production has yet to recover to its pre-war levels, and capacity utilization remains low. The decline in manufacturing has meant a deterioration of the quality and production capacity not only of the traditional sectors, such as armaments, steel, and the chemical industry, but also of clothing, textiles, leather, and wood production. As a result, exports have shifted to low-value-added products and raw materials (European Commission, 2003). Overall, the production of tradable goods has been poor, and imports have primarily provided for increased domestic consumption.

**Table 3:1 Output in BH, 1998-2003**

	Real GDP Growth by Sector (percent)					Value Added by Sector (percent GDP)				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
GDP growth annual percent)	9.6	5.5	4.3	5.3	4.0					
Agriculture	-3.4	-8.3	0.6	-1.8	-8.9	13.3	11.7	13.0	12.1	10.7
Industry	9.0	5.7	0.5	-1.9	11.1	24.4	24.9	27.8	26.0	27.8
o/w:										
Manufacturing	-0.5	7.2	1.8	3.8	6.5	14.9	15.1	12.5	12.3	12.6
Services	14.1	9.4	7.0	10.2	3.5	62.3	63.4	59.2	61.8	61.6

Source: EBRD (2003, p.56), IMF, *World Development Indicators* (2003), national statistical authorities and staff estimates.

3.7 **Ownership.** Although most firms are privately owned (Table 3:2), the share of the private sector in output was only 45 percent in 2002.<sup>38</sup> This is a much lower level than in the more advanced reform countries of central Europe and even the rest of the SEE region (with the exception of SAM).<sup>39</sup> BH has been unable to utilize adequately private sector activity as a source of growth despite the slight increase in private sector participation in output in 2003.

<sup>38</sup> The private sector share of GDP is calculated by the EBRD using available statistics from both official (government) and unofficial sources. The share includes income generated from the formal activities of registered private companies, as well as informal activities where reliable information is available. The term “private company” refers to all enterprises in which private individuals or entities own the majority of shares. Data from EBRD (2003), p. 126.

<sup>39</sup> See Broadman et. al. (2004). For example, the private sector share in GDP in 2002 was 80 percent in the Czech Republic, Hungary, the Slovak Republic, and Estonia, and 75 percent in Bulgaria and Poland. See EBRD (2003).

3.8 **Many privately owned firms are privatized companies.** While privatization has been under way for several years, with the sale of small- and medium-size firms mostly completed,<sup>40</sup> the state still holds majority stakes in the remaining firms. Mass privatization techniques and cash auctions were used to transfer ownership, primarily in medium-size firms. However, the divestiture of state ownership in the large industrial firms has been slow. Only 24 percent of the large SOEs were sold in the FBH (end-2002), and 42 percent in the RS. The privatization of large-scale strategic enterprises (mining, tobacco, refineries) has yet to take off, with only 18 out of 56 firms being sold in the FBH, and 4 out of 80 in the RS (European Commission, 2004). Put differently, over 50 percent of state-owned capital is still to be divested in some 70-80 large strategic enterprises, along with another group of over 350 mid-size firms in which the state is the majority owner.

3.9 **Firm Growth.** The number of registered industrial firms in the country increased steadily prior to 2001 (Table 3:2). Since there was a small change in the number of large firms, the opening of predominantly small private firms in BH has driven new business creation since 1999. In 2002, however, there was a significant drop in the number of enterprises in the FBH. This dramatic change is due to an administrative initiative in 2001 by the Statistical Office in the FBH to clean its database of inactive or fictitious firms. As a result, close to 20,000 firms were dropped from the statistical books in the FBH.

**Table 3:2: Business Creation, 1999-2003**

	1999	2000	2001	2002	2003
<b>RS</b>					
Total number of registered firms, all sectors	29,902	31,269	32 245	34 247	na
Total number of registered firms, industry sector <sup>1</sup>	3 072	3 337	3 516	3 823	na
Total number of employees in registered industrial firms	83,264	81,375	76,472	na	na
<b>FBH</b>					
Total number of registered firms, all sectors	43,220	47,281	49,053	29,779	27,501
Total number of registered firms, industry sector	9 262	10 400	10 975	4 220	3,914
Total number of employees in registered industrial firms	136 494	136 498	129 879	127 879	na

Source: FBH and RS Statistical offices.

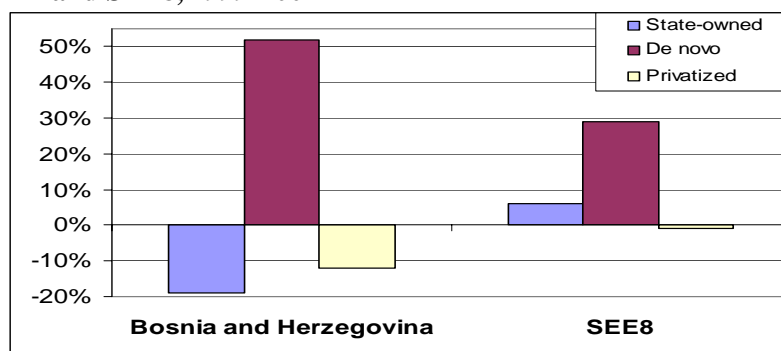
Note: <sup>1</sup> Includes mining, manufacturing, electricity, gas, and water supply.

3.10 **Employment Growth.** The increase in the number of enterprises in the FBH has not led to corresponding increases in employment in industry. As Table 3:2 indicates, there was a 6.3 percent decline in the number of full-time employees in the registered industrial firms in the FBH during 1999-2002, and a slightly stronger decrease of 8.2 percent of industrial workers in the RS during 1999-2001.

<sup>40</sup> In 2003, some 55 percent of the small and medium firms in RS and some 78 percent of the small and medium firms in FBH were privatized.

3.11 Data from the EBRD-World Bank Business Environment and Enterprise Performance Surveys—“BEEPS1”, which pertain to 1999, and “BEEPS2,” which pertain to 2002—can also be used to illustrate these points.<sup>41</sup> **The surveys shows that job creation in the sample of BEEPS2 firms was entirely concentrated in *de novo* firms**, while the state-owned and privatized firms registered negative rates of employment growth from 1999 to 2002. Compared to the regional trend, surveyed firms in BH fare better in job creation in the new private sector, but much worse in job destruction in the state and privatized firms, on average. Given that the *de novo* firms are in general of a small size, one would not expect a significant net gain in jobs for the country.

**Figure 3:1 Changes in Average Employment by Ownership in BH and SEE8, 1999-2002**



Source: BEEPS2.

Note: SEE8 comprises Albania, BH, Bulgaria, Croatia, FYR Macedonia, Moldova, Romania, and Serbia and Montenegro.

Annex 1 describes the BEEPS dataset.

3.12 A complementary analysis of a sample of enterprises in BH finds that the overall job flow rate in firms with more than 100 employees was negative in the period 1997-99; on average, 4.2 jobs were created while 5.3 jobs were lost (World Bank, 2002b). The shedding of industrial labor signals that some restructuring is ongoing among industrial enterprises. Nonetheless, job creation was insufficient in the aftermath of the war.

3.13 **Small and Medium-Sized Enterprises (SMEs).** These enterprises (firms with less than 250 employees) have played a prominent role in SEE countries, including BH (Table 3:3). Over 85 percent of the SMEs in BH are micro enterprises, with 10 or fewer employees. While this is in line with the overall regional trend of pronounced micro-enterprise participation in the enterprise sector, the number of SMEs (including the micro firms) per capita in BH is the lowest in the region, especially in comparison with the more advanced central European countries (Table 3:3). There are only seven SMEs per 1,000 people in BH, compared to 84 in Poland. In terms of sectoral composition, most of the SMEs in BH are registered in trade (45 percent), construction and manufacturing (27 percent), and services (12 percent).

<sup>41</sup> Annex 1 contains a detailed description of the BEEPS survey data and the caveats that need to be heeded in interpreting them.

### *Firms in the Informal Sector*

3.14 **An important characteristic of the enterprise sector in SEE is the comparatively large size of the informal economy.** Estimates of the size and characteristics of informal sectors are notoriously difficult to make and vary widely. In general, the size of the informal sector is at least a third of officially-measured GDP ( Table 3:54). In BH, the size of the shadow economy is estimated at over 34 percent of GDP (2000 estimates). For comparison, the comparable figure is 16.8 percent for the 21 OECD countries and 8.8 percent in the United States. Burdensome taxes and social security contributions, as well as onerous government regulations are the main causes for the informalization of the economy.<sup>42</sup>

**Table 3:3: Structure of SMEs by Sector, 2001**

	Number of SMEs and micro enterprises <sub>1</sub>	Number of micro enterprises <sub>1</sub>	Number of large enterprises <sub>1</sub>	Number of SMEs per 1,000 inhabitants <sub>1</sub>	Share of SMEs in trade <sup>2</sup>	Share of SMEs in services <sup>2</sup>	Share of SMEs in construction & Manufacturing <sup>2</sup>	Share of SMEs in other activities <sup>2</sup>
Albania	56,237	54,145	253	18.1	52.1	17.8	12.5	17.6
<b>BH</b>	<b>30,000</b>	<b>25,600</b>	<b>200</b>	<b>7.0</b>	<b>45.0</b>	<b>12.0</b>	<b>27.0</b>	<b>16.0</b>
Bulgaria	224,211	207,643	741	27.6	50.8	28.9	18.0	2.3
Croatia	63,135	41,988	426	13.7	35.0	7.0	28.0	30.0
Romania	612,862	311,260	1,955	27.4	63.0	16.0	14.9	6.1
Serbia and Montenegro	66,968	64,002	742	7.8	47.5	5.3	25.8	21.4
Czech Republic	876,990	830,601	1,671	85.1	35.0	19.9	23.9	21.2
Hungary	858,981	827,806	1,041	58.9	26.0	50.2	19.9	3.9
Poland	3,368,367	3,206,452	6,589	87.0	35.8	25.6	34.2	4.4
Slovak Republic	365,783	354,373	160	67.7	43.9	29.8	20.6	5.7

Source: EBRD survey of national authorities, European Commission (2002), and UN/ECE (2003)

Notes: <sup>1</sup> Data for Albania, Croatia, the Czech Republic and Hungary are for 2002; for BH, Poland, Serbia and Montenegro, and the Slovak Republic data are for 2001; for Bulgaria and Romania data are for 2000 <sup>2</sup> Data for Bulgaria are for 2000.

3.15 **Informal firms in BH tend to be of small or medium size operating in industries producing low value-added products or in services such as retail trade.** While the large informal sector does provide jobs, alleviate poverty, and support economic activity, its downside goes beyond the loss of revenues for the governments. It provides unfair competition to the formal sector and erodes the enforcement of property rights and contracts. Firms in the gray economy have an advantage over those in the formal sector, as the former do not pay taxes and

<sup>42</sup> See Schneider (2002) whose definition of the informal economy includes “unreported income from the production of legal goods and services, either from monetary or barter transactions - hence all economic activities which would generally be taxable were they reported to the state (tax) authorities.”

are not subject to regulation. These disadvantages of a large informal sector make the formalization of informal activity a policy priority for the BH government.

**Table 3:4 Size of the Informal Economy, 2000**

Country	Informal Economy, percent of GNP
Albania	33.4
<b>Bosnia-Herzegovina</b>	<b>34.1</b>
Bulgaria	36.9
Croatia	33.4
Moldova	45.1
Romania	34.4
Yugoslavia	29.1

*Source:* Schneider (2002), p. 13.

3.16 Research to understand what drives SEE firms to operate in the informal sector concludes that since the cost and the difficulty of doing business are high, the benefits of operating in the gray economy outweigh the efforts to comply with cumbersome regulations (Broadman et. al., 2004). In order to bypass formal regulations, businesses opt to pay bribes to public officials. Data from BEEPS2 confirm this observation: over 45 percent of surveyed firms in BH report having paid bribes to public officials in 2002 to obtain licenses, permits, and/or inspection certificates. This has cost firm managers, on average, between 8 and 10 percent of their time (Gray, Hellman and Ryterman, 2004).

### *Foreign Firms*

3.17 **The limited presence of foreign firms in BH is reflected in the low inflow of FDI compared to the other transition economies in CEE and even to some of the economies in SEE** (Broadman et. al., 2004). While inflows of FDI rose from US\$130 million in 2001 to US\$230 million in 2002, inflows are still negligible compared to that in the Czech Republic (US\$9 billion in 2002) or Poland (US\$3.7 billion in 2002). On a per capita basis, BH also fares poorly in comparison with the more advanced transition economies. While the cumulative FDI inflow per capita between 1989 and 2002 was US\$198 in BH, in the Czech Republic and Hungary it was US\$3,554 and US\$2,253, respectively. As Table 3:5 shows, the cumulative FDI inflows to BH are the lowest among the eight SEE countries in volume and per capita terms.

3.18 **As noted in Chapter 2, the low level of FDI limits the ability of BH firms to reach international goods markets.** Low inflows of FDI reflect not only a limited presence of foreign firms in the country, but also a dominance of labor-intensive products in the country's exports. It also implies the relatively poor participation of BH's enterprise sector—in terms of internationalization and fragmentation of production—in the global economy.

3.19 **The specifics of the presence of foreign investors in BH are revealed by a recent survey by the Central Bank of BH (CBBH).**<sup>43</sup> The survey presents a comprehensive snapshot

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<sup>43</sup> The survey covered more than 720 enterprises with foreign investors. Among these firms, 55 percent had foreign investment over KM 100,000. In the majority of these firms, the foreign investor held at least 10 percent of the

of foreign-owned firms in BH. Several interesting facts emerge. First, Croatia appears to be the largest foreign investor in BH, accounting for one-third of the total foreign investment in the sample. Along with Austria and Germany, the three top investor countries accounted for 61 percent of the inflows of FDI in BH. Austria alone accounted for 59 percent of the total foreign direct investment in banks. Finally, firms in manufacturing and banking are the main recipients of foreign investment in the country, followed by firms in trade and other services.

**Table 3:5: Foreign Direct Investment Inflows in South Eastern Europe, 1997-2002**

Country	Cumulative FDI inflows, US\$ m	Cumulative FDI inflows per capita, US\$	FDI inflows per capita, US\$		FDI inflows, percent of GDP	
	1989-2002	1989-2002	2001	2002	2001	2002
Albania	936	303	66	44	4.8	2.8
<b>BH</b>	<b>753</b>	<b>198</b>	<b>34</b>	<b>61</b>	<b>2.7</b>	<b>4.4</b>
Bulgaria	4390	560	79	55	4.7	2.8
Croatia	6296	1419	316	86	7.2	1.7
FYR Macedonia	935	476	221	50	12.9	2.7
Moldova	849	199	37	25	10	6.6
Romania	9008	415	52	50	2.9	2.4
Serbia and Montenegro	1717	206	20	67	1.4	3.6

Source: EBRD Transition Report 2003, p.65.

**3.20 Despite the comparatively low level of FDI, foreign resources play a key role in the development of the enterprise sector through foreign aid and grants as well as remittances,** as discussed elsewhere in this study. BH is among the top 20 countries in the world receiving remittances, with remittances equivalent to over 11 percent of GDP. On a corporate level, the case studies suggest that foreign aid and grants have been a *double-edged sword* for business development. On the one hand, the resources they provide have helped with post-war reconstruction. On the other, local businesses are reluctant to pick up projects which are not foreign-funded or guaranteed. As a result, foreign-funded projects may well crowd out local projects (Box 3.1).

### **International Integration of BH's Businesses**

**3.21 Partly as a result of low inflows of FDI, the enterprise sector in BH is characterized by weak competitiveness in both internal and external markets,** as revealed by macroeconomic and enterprise data. The supply side response of the economy has not been sufficient for narrowing the trade deficit and successfully integrating into the world economy. The lack of productive capacity and the inability to comply with EU import standards prevents the country from taking full advantage of the autonomous trade measures (ATMs) introduced by the EU in September 2000 and the Free Trade Agreements (FTAs) with the countries of SEE.

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equity (owner shares) in the enterprise; 127 enterprises (including 23 banks) accounted for 81 percent of the total foreign investment in the country. See [www.cbbh.gov.ba](http://www.cbbh.gov.ba).

### **Box 3.1 Foreign-Funded Projects Crowding out Domestic Ones**

A Sarajevo-based construction company, established in 1990, was forced to disrupt operations during the war. The company re-started its construction, engineering, and design activities in 1996. The general manager of the firm shares the fact that the trigger to start operations again came from the financial support for projects which the international community provided for the reconstruction of BH. This helped the company expand tremendously in the post-war period. Starting with 15 employees in 1990, the company now employs over 230 workers. In the post-war period, the company engaged in the purchase of three SOEs and opened a concrete-production factory.

The company caters mainly to foreign clients, and has generally steered away from domestic private and state projects unless they pay in full and in advance. In fact, the general manager shared the fact that he turned down many domestic clients, as “the foreigners come with secure financing and pay more, while domestic clients complain about the costs.” There are three to four other companies in Sarajevo of the size and capacity of the interviewed company which also work primarily with foreign clients with very similar pricing of their services. The interviewed manager indicated that as long as his company has foreign clients it does not plan to reduce its prices or redirect its activities towards domestic customers. The company avoids dealing with the government, too, but for the following reasons: cumbersome bureaucracy, corruption, as well as confusing government procurement procedures make the state an unattractive client for the construction firm.

*Source:* Broadman et al. (2004).

**3.22 The enterprise sector of BH is poorly integrated into international production and distribution networks.** Firms in BH are primarily inward-oriented. For example, over 63 percent of the surveyed firms in BEEPS2 relied on foreign sources for their supplies of material input. At the same time, export receipts were 10.6 percent of sales revenue in 2002, a number lower than the SEE8 regional average of 12.5 percent. Only surveyed firms in SAM reported weaker export intensity among the eight SEE countries (Broadman et. al., 2004).

**3.23** Surveyed firms in BH also fared worse than the average SEE firm regarding their activities in new international markets.<sup>44</sup> Every fifth surveyed SEE firm exported to new markets between 1998 and 2002, while only 6.6 percent of the surveyed firms in BH had reached new foreign customers during the same period. The reaching of new markets by BH companies between 1998 and 2002 is similar to the international expansion of firms in Albania and SAM, but considerably lower than that of firms from Romania and Bulgaria.

**3.24** The picture that emerges of the enterprise sector is therefore as follows: the share of the private sector in formal GDP in BH is among the lowest in the SEE region, reflecting the slow progress in privatization, enterprise restructuring, and new business creation. The vast majority of private enterprises are small and medium-size, and the state presence in the economy is appreciable. Unsurprisingly, foreign firms do not play a prominent role on the enterprise scene in BH. In contrast, the informal sector is relatively large. In addition, market integration of the enterprise sector in BH is poor. This suggests that major structural and institutional barriers to the development of a vibrant private sector need to be removed.

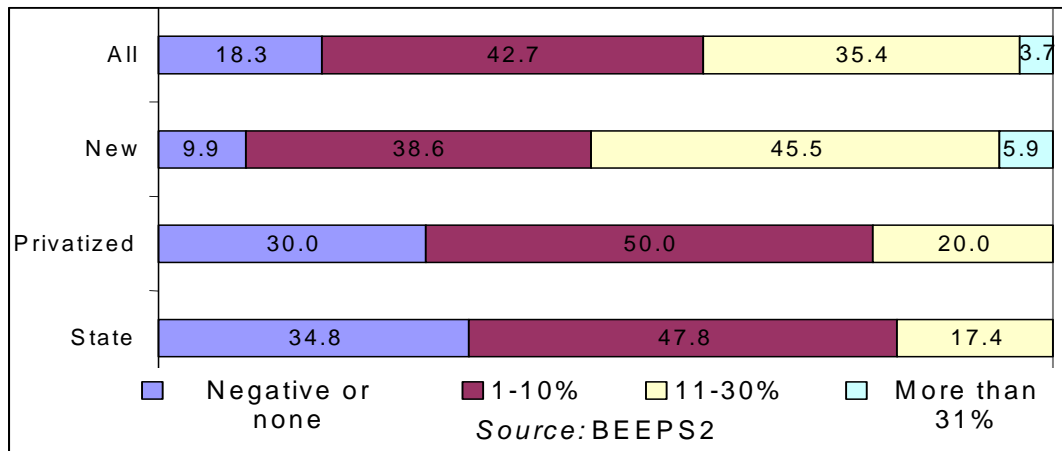
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<sup>44</sup> Broadman et. al. (2004). BEEPS2 asked the surveyed businesses to respond to the following question: “Has your company exported to a new country since 1998?”

### C. DIMENSIONS AND DETERMINANTS OF ENTERPRISE PERFORMANCE

3.25 **Patterns of Enterprise Performance.** To assess the performance of the enterprise sector in BH, we look at measures of corporate performance such as profit-to-sales ratios, operating profits/losses, and capital and labor productivity and try to link them with firm characteristics. BEEPS data from 2002 show significant variations in the distribution of profits by ownership and size among the surveyed firms in BH. Small and *de novo* firms have significantly higher profit-to-sales ratios than the rest of the surveyed firms. Moreover, data on the dispersion of firm profitability in 2001 shows that close to 20 percent of the surveyed firms in BH are loss-makers or are not profitable. Over one-third of the SOEs and one-third of the privatized firms in the sample fall into this category of loss-makers, as opposed to less than 10 percent of the surveyed *de novo* firms. Most of the surveyed firms indicate a profit-to-sales ratio in the 1 to 10 percent range, regardless of ownership.

**Figure 3:2: Profit-To-Sales Ratio by Firm Characteristics, 2001 (percent of total firms)**



Note: Annex 3.1 describes the BEEPS dataset.

3.26 Using BEEPS2 data for 2002, we also perform differences in means tests for firms' profitability (profit-to-sales ratio) by firm size and ownership. We find that there is a statistically significant difference (at 1 percent) between the average profitability of *de novo* firms versus all other (privatized and state) firms.

3.27 **In addition, among the BEEPS surveyed enterprises in 2002, state firms' sales, on average, increased least compared with the growth in sales of private and new firms** (Table 3:6). Among the firms in the sample whose sales grew since 1998, the greatest average increase was achieved by the *de novo* enterprises followed by the privatized firms and then state-owned firms. Given the slow pace of privatization and the limited enterprise restructuring efforts, it is not surprising that the state firms registered the greatest losses on average in their sales, which is in accord with the expectations of poor firm performance in the state sector in a transitional environment.

**Table 3:6 Sales Growth of Firms by Ownership, 1998-2002**

<b>Changes in Sales Growth since 1998</b>			
<b>By Ownership Type:</b>	<b>State firms</b>	<b>Privatized firms</b>	<b><i>De novo</i> firms</b>
Average	1.0	4.9	12.7
Average Increase	24.75	32.17	34.82
Average Decrease	(36.0)	(25.8)	(32.9)

Source: BEEPS2.

Note: Annex 3.1 describes the BEEPS dataset.

3.28 Measures of capital and labor productivity also reveal the causes of the differences in the performance of various types of firms. Capital productivity is the measure of how well physical capital (such as machinery and buildings) is used by firms in providing goods and services. BEEPS data reported in Table 3:7 reveal that average capital productivity was almost three times lower in the surveyed state-owned firms than in the *de novo* firms in BH in 2002. Surveyed privatized firms also performed worse than their new counterparts, although they reported a capital productivity that was two times higher than the state firms in the sample. On average, labor productivity (that is, output per unit of labor) was lowest in the privatized firms and highest in the *de novo* firms (Table 3:7).

**Table 3:7: Capital Productivity and Labor Productivity, 2002**

<b>Ownership Type</b>	<b>Capital productivity</b>	<b>Labor productivity</b>
State firms	1.7	16.9
Privatized firms	3.2	13.0
<i>De novo</i> firms	5.0	26.5

Source: BEEPS2.

Note: Annex 3.1 describes the BEEPS dataset.

3.29 The results of a different enterprise-level survey, conducted among the 1000 largest firms in the FBH and the 1000 largest firm in the RS, provide another opportunity to disentangle the performance of the enterprise sector. The data are based on accounting information for 2002 provided by these firms and described in detail in Annex 3.2. The survey focused on firms with over 122,000 in the FBH and more than 109,000 employees in the RS. The median firm employed some 25 (50) workers in the FBH (the RS). The largest enterprise had over 6.700 (3,500) employees in the FBH (the RS).

3.30 In addition, the surveyed firms have very thin profit margins. If their official financial statements are to be believed, operating profit as a share of total assets was approximately 2.6 percent in 2002 in the RS and 0.6 percent in the FBH. Roughly one-half of the firms in the RS were in fact loss making, with average losses twice as large as average profits of the profitable firms.

3.31 These data reveal a strong correlation between firm size in each Entity and average gross profit margin.<sup>45</sup> Smaller firms tend to perform much better than their larger counterparts (Table 3:8). In the FBH, the average gross profit margin of firms with less than 50 employees was 2.3 percent in 2002, a slight improvement over the 2001 average level of 1.8 percent. Surveyed small firms were even more profitable on average in the RS; their average gross profit margin in 2002 was 2.9 percent. In contrast, performance of large firms in both Entities, which generally tend to be still in state hands or recently privatized, worsened. In 2002 these firms reported an average gross margin of -8.3 percent and -14.8 percent in the FBH and the RS, respectively. Surveyed medium-sized firms in both Entities were also loss-makers.

**Table 3:8: Average Gross Profit Margin by Number of Employees (in percent)**

<b>Firm Size, Number of employees</b>	<b>FBH</b>	<b>RS</b>
<b>2002</b>		
Small (0-49)	2.3	2.9
Medium (50-249)	-1.1	-6.7
Large (250 and over)	-8.3	-14.8
<b>2001</b>		
Small (0-49)	1.8	1.7
Medium (50-249)	-1.2	-9.8
Large (250 and over)	-6.3	-22.7

*Source:* AFIP.

Note: See Annex 3.2 for data description.

3.32 While average sales increased by a little over 1 percent from 2001 to 2002 in both Entities according to the financial statements of the firms in the two data sets, sales revenues are not sufficient to sustain an efficient and healthy financial structure in these firms. Arrears to suppliers and for wages are a particular problem for these firms. For example, wage arrears amount to more than 4.5 percent of sales among the 1,000 firms in the RS. Overdue payments to suppliers of the top 20 percent of state-owned loss-makers are equivalent to 21 percent of the total debt of these firms. In addition, the international exposure of the surveyed firms is very limited. Exports in 2002 were only 8 percent of total sales in the 1000 largest firms in the RS.

3.33 **Determinants of Differences in Enterprise Performance.** Based on the analysis of the BEEPS survey data and the two data sets of financial information on the largest firms in the FBH and RS, we put forward and test the hypothesis that better firm-level performance is associated with an investor friendly institutional environment that reduces obstacles to entry, exit, and day-to-day business operations. The results can provide insights into the factors that account for the observed differences in profitability and the extent to which higher firm profitability is associated with elements of market structure and firm conduct that reflect the potential to exercise market power, controlling for other firm characteristics.

3.34 Annex 3.3 describes in detail the specific dataset we employ and presents descriptive statistics. Using ordinary least squares (OLS) the following simple model is estimated:

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<sup>45</sup> Gross profit margin for each surveyed company is the ration of annual gross profit to total annual sales, based on BEEPS2.

$$P_i = \alpha A_i + \beta B_i + \chi C_i + \gamma F_i + \varepsilon_i, \text{ where}$$

$P_i$  is the performance of firm  $i$  as measured by gross-profit-to-total sales ratio

$A_i$  is the competitive structure of the marketplace of firm  $i$  measured by market share, vertical integration, and horizontal integration

$B_i$  measures the softness of budget constraints of firm  $i$  estimated through various types of arrears

$C_i$  is the perceived security of contract rights by firm  $i$  measured by sales on credit

$D_i$  is the accessibility of firm  $i$  to financial resources

$F_i$  is the characteristics of firm  $i$ , such as ownership category, capturing state, privatized and new firms as well as size measured through the volume of sales in 2001

$\varepsilon_i$  is a standard error term.

3.35 The results of the multivariate linear regressions are presented in Annex 3.3 and in more detail in Box 3:2. The models explain between 28 and 33 percent of the variation in profits as a percentage of sales. The results are statistically significant. Regression (4) is the one with the best fit.

3.36 To summarize, regression estimations indicate the following:

- (i) Entry and exit barriers have a significant negative impact on a firm's performance in BH, controlling for firm-specific characteristics.
- (ii) Vertical integration influences positively firm performance, and so does market share, after controlling for firm size and horizontal integration.
- (iii) Greater horizontal integration does not increase profitability.
- (iv) Arrears, as proxies for the softness of budget constraints, are in general negatively associated with firm profitability.
- (v) Poor access to credit impedes the performance and growth of firms, when firm-specific controls are in place.
- (vi) Insecurity of contract rights constrains the performance and growth of firms. Confidence in contractual relationships is positively associated with firm profitability.
- (vii) New private firms register a higher profitability than privatized firms, which in turn are more profitable than SOEs.

### **Box 3:2 Determinants of Firm Performance**

The four regression estimates suggest that both entry and exit barriers have a significant negative impact on a firm's performance in BH, controlling for firm-specific characteristics. The estimated positive and statistically significant coefficients on vertical integration suggest that the market structure significantly influences the overall performance of the firms in the sample. Although not statistically significant, market share appears to be positively associated with profitability after controlling for firm size and horizontal integration. Horizontal integration is negatively associated with profitability, but it is not statistically significant at 10 percent in three of the four cases. Nonetheless, a higher degree of horizontal integration is counterproductive to profitability, *ceteris paribus*.

On the exit side, we look at the levels of different types of arrears as proxies for the softness of budget constraints in the sample. Arrears to suppliers and workers, which are the two dominant types of overdue payments in BH, are negatively associated with firm profitability. However, tax and utility arrears are positively, although not statistically significantly, related to firm performance.

Poor access to credit impedes the performance and growth of firms when firm-specific controls are in place. In all cases, the estimated coefficients on access to financing are positive and statistically significant, thus suggesting that, for the sample of firms in BH, the easier access to credit is, the greater the firm's profitability is, all other things being equal.

Insecurity of contract rights constrains the performance and growth of firms. Sales on credit, a measure of confidence in contractual relationships, is positively associated with firm profitability in a statistically significant way, all other things being equal. This indicates that firms that opt for on-the-spot transactions or require pre-payments, and that do not have faith in contracts, perform worse than firms that use sales on credit.

Among the firm-specific characteristics that serve as controls in the regression, the estimated coefficients on the ownership variables are statistically significant with the expected positive signs in the different specifications. *De novo* private firms register a higher profitability than privatized firms, which, in turn, are more profitable than SOEs. However, the variable through which we measure size does not appear to be statistically significant in explaining profitability.

## **D. CONCLUSION**

3.37 The share of the private sector relative to formal GDP in BH is among the lowest in the SEE region, reflecting slow progress in privatization, enterprise restructuring, and new business creation. Small- and medium-sized enterprises comprise the vast majority of private enterprises in the economy, while state presence remains substantial. Not surprisingly, foreign firms do not yet play a prominent role. In contrast, the informal sector is relatively large. In addition, market integration of the enterprise sector is poor. This suggests that major structural and institutional barriers to the development of a vibrant private sector need to be removed.

3.38 Empirical analysis of survey data on BH firms presented above indicates that new private businesses register a higher profitability than privatized firms, which in turn are more profitable than SOEs. The survey data suggest that entry and exit barriers have a significant negative impact on firm performance. While market share and vertical integration appear to enhance surveyed firms' profitability, a high degree of horizontal integration is counterproductive. Arrears as proxies for "soft budget constraints" reduce firm profitability, as do poor access to credit, and insecurity of contract rights. While these results must be interpreted cautiously in light of the quality and coverage of the survey data, they do suggest the key impediments to business development and growth in BH. Analyzing these factors in detail is the subject of the next chapter.