Internal and External Obstacles to the Development of SMEs in Bosnia and Herzegovina

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Abstract

This article describes the small and medium enterprise (SME) sectors in Bosnia and Herzegovina (BiH) and other Western Balkan countries, and compares their development. The authors identify the levels of development achieved, remedial measures and activities for stimulating this sector. There is special emphasis on external and internal obstacles to small and medium-sized manufacturing enterprises in BiH. The authors conclude that in respect to SMEs BiH lags behind other countries in the region, where this sector has achieved dynamic development and a majority share in the employment market, exports and GDP. That said, there remains a need across the whole region to resolve obstacles in the domestic market, alongside initiating intensive activities aimed at introducing

the SMEs to the Single European Market. For BiH, primary research has been carried out to determine the external and internal obstacles to SMEs in the country's manufacturing sector. The key obstacles are identified, their intensity and grade determined, and they are classified into three groups. Factor analysis was used in determining six factors explaining external obstacles and two factors for internal obstacles. It has also been confirmed that other companies apart from manufacturing SMEs face broadly similar external obstacles, and that these obstacles are more in evidence when compared to the situation in other Western Balkan countries. Recommendations are offered to the Government of BiH and SME managements for removing the obstacles which have been identified.

Keywords: SMEs, manufacturing, obstacles, factor analysis, Western Balkans, Bosnia and Herzegovina (BiH)

JEL classification: L26, C38

1 Introduction

SMEs have played a crucial role in the economic transition of all the countries of Central and Eastern Europe. Apart from transitional countries, they are also very important for the functioning of developed countries, since they employ large numbers of workers. For example, in countries which belong to the Organization for Economic Co-operation and Development (OECD), 60-70 percent of all employees work in this sector. In addition, SMEs account for 95 percent of companies (OECD, 2003). In the European Union (EU), there are more than 23 million SMEs, which constitute more than 99 percent of all companies and employ 66 percent of the total workforce, with some 100 million jobs. This means that SMEs account for more than three quarters of the employment market. Developed countries have created their industrial power on the basis of SMEs, and this sector offers transitional countries the opportunity for the fastest implementation of modern solutions and practices. BiH is a signatory to the European Charter for Small Enterprises, but it still has the smallest

number of SMEs per capita in Southeast Europe (Džafić, 2007), as well as a low level of company development, which is the result of various obstacles. The general aim of this research is to determine internal and external obstacles to the development of the manufacturing SMEs and to understand the situation the SMEs are facing. The results of the research point to a need to initiate steps within companies and to develop institutions which will bring about changes in the wider business environment. Thus, the central research hypothesis is: to identify internal and external obstacles to the development of manufacturing SMEs, to determine their intensity and rank, to classify them and to correlate the obstacles with factors which will enable decision-makers at various levels to implement measures for the removal or reduction of these obstacles.

2 An Overview of the Results and Methodologies Used in Recent Research on the Development of Manufacturing SMEs in the Western Balkans

While there are various papers pertaining to the problem of obstacles to the development of SMEs in general in Western Balkan countries, few deal with the obstacles facing manufacturing SMEs. To research SMEs in Croatia, Dumičić and Knežević (2007) used an original questionnaire for random samples of companies, and this showed that most Croatian companies predicted changes independently, largely through external sources of information, market research and personal judgment. Butigan (2008) used Michael Porter's model of five concurrent powers to analyze the attractiveness of Croatia's retail trade in petroleum products and to identify the key factors needed for success in the industry. She showed that the Croatian petroleum products retail trade was facing a big threat from new rival enterprises, and that competition among the existing enterprises was intense. In Serbia, Bešić and Đorđević (2008) analyzed the need for organizations to have a modern concept of business management, in order to fulfill the goals of business excellence. In Montenegro, the Government of the Republic of Montenegro (2007) identified obstacles to SME growth and

development, including business climate, and analyzed financial and institutional support, the educational support system, consulting, competitiveness and export strategies. The authors from the former Yugoslav Republic of Macedonia (FYRM) have provided a brief overview of all the major obstacles and issues affecting the SME sector. The document puts forward key areas where policy improvements are needed in relation to the SME sector, including the legal, regulatory and institutional environment, the business climate, business support, access to finance and access to communications and IT (Pinto et al., 2007).

For BiH, Hasić (2006) recounted the problems of SME development with a view to determining the ability of SMEs in BiH to adapt to the future challenges which would be brought about in the business environment by the inclusion of BiH in the globalization process. His paper highlighted important issues for BiH's economic revitalization and its participation within the neighboring and wider regions as a successful competitor. SMEs in BiH are the weakest component in the overall economic organizational structure. Furthermore, Hasić (2001) put forward his analysis of the restrictions imposed on enterprises in BiH. His research focused on the factors which affect most directly the levels of economic freedom and prosperity in a country. He addressed several variables, which fit into 10 broad categories: trade policy, taxes, government interventions in the economy, monetary policy, the flow of capital and the policy of foreign investments, banking, prices and payment control, ownership rights, regulations and the black market. Also in BiH, Džafić and Rovčanin (2009) described how the development of SMEs and entrepreneurship is in its initial stage, although this sector of the economy could become a primary force in the country's development. There is no policy, nor are there specific objectives for the development of SMEs in BiH. The BiH economy, like that of other developed and transitional countries, requires the strategic development of the SME sector in order to decrease the unemployment rate, which in BiH is the highest in Europe. The private sector has a very low share of the overall economy in BiH, with only 45 percent of GDP, and the Index of SMEs development[1] is very low

1 More information is given in United Nations Economics Commission for Europe (2003).

- only 118.2, by contrast with Slovenia's 2,534.9. For Albania, Gruda and Milo (2010) described the main obstacles to the growth of SMEs, pointing out that in the early transition phase an inherent phenomenon of the market is competition, in which Albanians had no experience. Competition was more than an economic issue: the state had totally eliminated competition related to market prices and eschewed competition as a regulator of supply and demand.

3 A Comparative Analysis of the Key Indicators for the Western Balkan Economies

Competitiveness in the economies of the Western Balkan countries (Albania, BiH, Croatia, FYR Macedonia, Serbia, Montenegro and Kosovo under UNSCR 1244/99) represents a strategic European interest. Well-functioning market economies which are resistant to global economic pressures are significant for the political stabilization of the Western Balkan region, as well as for economic growth and increased jobs in Europe, which are the EU's main policy objectives for the years to come (OECD et al., 2009). Table 1 shows the main country indicators for the Western Balkan region.

Table 1: *Main Country Indicators in 2007*

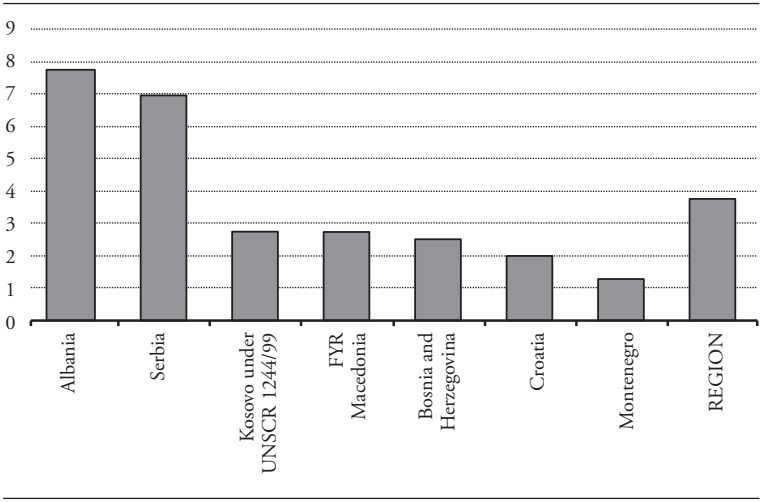
	Total area (in km²)	Population on 1/12/2007 (in thousands)	Population density (per km²)	GDP (in mil. EUR)	GDP growth (in percent)
All Western Balkan countries	264,462	23,614	89.2	85,255.53	-
EU-27	4,309,406.6	492,090	114.4	12,339,731	3.0

Source: Eurostat.

At the beginning of the 21st century, the lack of big markets has led to fragmentation, allowing SMEs with innovative entrepreneurial skills successful entry into the smaller markets. While big corporations have faced stagnation, SMEs have undergone extensive economic growth. There is evidence that SMEs

create employment opportunities and contribute to economic growth. It is certain that SMEs, by their nature, achieve profitability in the quickest possible way, through innovation and efficient organization. Valuable lessons have been learned from the experiences of those countries which have already passed through the transition from economic underdevelopment to levels of medium productivity. Logically, the most viable solution to the problems faced by the Western Balkan countries is to provide organized support for establishing and developing SMEs in the private sector. In this context it is relevant to mention the European Charter for small enterprises signed by the Western Balkan countries (The Charter). It calls on the member states to provide support in ten basic areas, including education, cheaper and faster start-ups, better legislation and regulation, increased availability of skills and improvement of on-line access for SMEs (OECD et al., 2009). Figure 1 compares results between 2007 and 2009 to show overall cumulative changes in SME Policy Index scores in the Western Balkans.

Figure 1: *The Overall Cumulative Changes in Scores in the Period 2007-2009 in the Western Balkans*



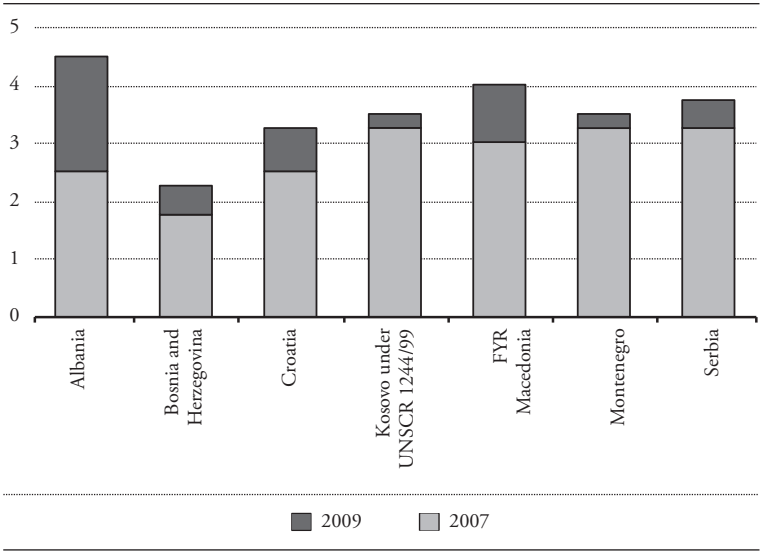
Source: OECD et al. (2009).

While Figure 1 shows the overall changes in SME Policy Index scores from the Charter dimensions for each country, Figure 2 shows the specific dimension of cheaper and faster start-up. Because of the large number of new indicators, the 2009 results for dimensions 1, 4 and 7 cannot be compared to those from 2007.[2]

The Charter assessments over the years 2007-2009 offer a clear picture of the challenges facing policy-makers in engineering and steering reforms in the area of SME policy. Two examples of success in the region are Albania's restructuring of the company registration process, with a state-of-the-art registration system introduced in less than two years, and the launching of the one-stop registration system in the FYR Macedonia. Lack of success in the same area is demonstrated in BiH, where company registration reform, under consideration since 2003, has stalled (OECD et al., 2009). The 2007 report classified the economies of the Western Balkan countries according to the level of their policy performance. One group, comprising Albania, BiH and Kosovo under UNSCR 1244/99, was rated at around level 2 on the level of performance across the ten dimensions. This denoted that the institutional and legal framework for SME policy was still relying on *ad hoc* interventions and pilot projects, and was in need of increased concretization. A second group, made up of FYRM, Montenegro and Serbia, showed that these countries had largely completed the legislative and institutional framework supporting SME policy, and had entered the phase of policy implementation. Their performance was rated between levels 2 and 3 in most dimensions. Beyond these two groups, Croatia was singled out as the most advanced country in terms of SME policy. In each area, excluding human capital and tax policy, Croatia's performance was rated as well above level 3. Therefore we have taken Croatia as our benchmark in this research project. Figure 2 shows the performance comparisons in the dimension of cheaper and faster start-ups between 2007 and 2009.

2 OECD et al. (2009: 14-30).

Figure 2: *Dimension 2 - Cheaper and Faster Start-up*



Source: OECD et al. (2009).

OECD et al. (2009) reveal that two economies in the region are still in the phase of completing the basic institutional, legal and regulatory requirements underpinning SME policy, for a variety of reasons. These are Kosovo under UNSCR 1944/99 and BiH. Within BiH, there are performance differences between the two entities of the BiH Federation and the Republic of Srpska and the Brčko District (OECD et al., 2009). BiH's progress through the transition phase has effectively been stalled for some years, so the country lags behind all the others in Southeast Europe. Its complicated political and constitutional structure is a major constraint on reform and good governance. Because reform is paralyzed, the country also lags behind other potential and actual EU candidates in the region in the accession process (EBRD, 2010). A comparative analysis of the conditions for starting up enterprises in the Western Balkan countries is given in Table 2.

Table 2: *Comparative Analysis of the Conditions for Business Establishment in the Western Balkan Countries*

		ALB	BiH	CRO	KOS	FYRM	MNE	SRB
No. of days to complete the overall process	2007	39	54	45	23	18	24	18
	2009	8	60	40	22	9	21	23
No. of steps to complete the overall process	2007	11	12	10	5	10	15	10
	2009	6	12	8	12	7	15	11
Total cost of the overall process (EUR)	2007	429	679	739	–	158	182	252
	2009	575	845	930	1066	99	192	97
Total cost of the overall process (% of income per capita)	2007	22.4	37	12.2	22	7.4	6.6	10.2
	2009	25.8	30.8	11.5	78	3.8	4.4	7.6
Minimum capital requirement (% of income per capita)	2007	36.7	52	20.6	Over 40	112	0	7.6
	2009	32.3	36.3	16.6	0	0	0	6.9

Source: World Bank and IFC (2010).

From this table we can conclude that BiH came out worst in terms of business establishment compared to the other countries, needing the highest number of days in 2007, and even more in 2009. The number of steps in the process remained the same, but registration costs increased. In some of the other countries the business environment was significantly improved (OECD et al., 2009). BiH ranks 110 out of 183 in the World Bank's 2011 ease-of-doing-business survey. It is ranked 160th for starting a business and 139th for dealing with construction permits. BiH is ranked 110th out of 179 in the Heritage Foundation's Economic Freedom Index, 82nd out of 122 in the Milken Institute Capital Access Index (eStandardsForum, 2010). In OECD et al. (2009) it was suggested that BiH should take the following steps, among others: improve entrepreneurship education and training, enable cheaper and quicker start-ups, enact better legislation, improve development skills, improve on-line access, gain more from the Single Market, improve access to finance (with provision of financing schemes for SMEs, including equity funds and business angles), strengthen techno capacity, improve successful e-business models and develop stronger representation.

Based on World Bank and IFC (2010) and the other sources cited above, the following recommendations can be made to the policy-makers in BiH in relation to the external obstacles. The BiH Government should reduce:

- the number of procedures (12), number of days (60), costs and minimum capital for starting a business; and the number of procedures (16), number of days (255) and costs (578.1US$) in relation to dealing with construction permits;
- the number of procedures (7) and number of days (33) to register property, and the costs of registration (5.5 percent of the property value), which would improve the strength of legal rights index (rank 5), the credit depth of information index (also rank 5) and the investor protection index (rank 93);
- the number of tax payments (number per year 51, rank 127), time-hours per year for tax payments (422), export days (rank 71), export costs (1,240US$), import days (16) and import costs (1,200US$);
- the number of procedures (rank 124) and number of days for enforcing contracts (595), and the number of years for closing a business (3.3 years, rank 73). The cost of closing a business in BiH amounts to 9 cents per US$, with a recovery rate of 34.7 cents.

In BiH there are currently 129,644 enterprises, of which 60,000 have been registered as a trading business. This figure is smaller when compared to Croatia, with 239,131 enterprises, or FYRM, with 180,000 (Džafić, 2007).

4 Empirical Research Results for the Internal and External Obstacles to the Development of Manufacturing SMEs in BiH

4.1 Research Methodology and Data Analysis

Our primary research was conducted between May and July 2010, using a structured questionnaire to collect data, which was delivered to respondents by post or e-mail. The fieldwork was conducted methodically, with follow-up telephone calls or e-mails encouraging respondents to complete their questionnaires and return them. The main respondents were the top managers in small and medium-sized enterprises registered in the Yellow Pages directory in BiH for 2005/2006. Using random sample methodology, we selected 100 active enterprises for the research.[3] The structure of the sample by sections and divisions was as follows: manufacture of food and beverages 24 percent, manufacture of metal products excluding machinery 23 percent, processing of wood and manufacture of wood products excluding furniture 10 percent, manufacture of textiles 9 percent, furniture manufacture 8 percent, manufacture of other non-metalic mineral products 8 percent, manufacture of leather and leather products 7 percent, other 11 percent. The research area covered the whole of BiH, with 82 percent of the respondents coming from the BiH Federation, 16 percent from the Republic of Srpska and 2 percent from Brčko District. Sixty-one percent of the distributed questionnaires were returned, which was satisfactory for this type of methodology.

The questionnaire was divided into two parts and comprised 140 questions. The first part covered some of the general characteristics of the enterprises (structure, market orientation, whether they held quality assurance certificates, whether they had difficulty implementing innovations, etc.), while in the second part the

3 In conducting the research we also used a reserve list, because some enterprises had been shut down, or the addresses and phone numbers in the Yellow Pages were no longer valid.

respondents were asked to grade the importance of obstacles to business classified as follows:[4]

- External obstacles:
  - the general business climate;
  - economic environment;
  - institutional infrastructure for the development of manufacturing SMEs;
  - legal obstacles;
  - business establishment, issuing permits, ownership protection, taxes, court protection, international exchange rates;
  - the labor market;
  - financial obstacles;
- Internal obstacles.

Data analysis was carried out using univariate and multivariate statistical analysis. We faced some practical difficulties during the research process. The first problem was finding the private enterprises, as many were registered at one address, but did business from another. Our second problem was receiving incorrect information from the database about the classification of companies, because many were registered as industrial or service businesses, when in reality they were trading companies. In identifying the key internal and external obstacles facing manufacturing SMEs in BiH, we used factor analysis, whose main aim is to describe the interconnection of a greater number of observed variables with a smaller number of basic or latent variables. The basic model for the factor analysis is shown in the following (Zahirović, 2005):

$$y = B \cdot f + u \ , \tag{1}$$

4 The respondents were asked to grade business obstacles according to their experiences with ratings from 0-3, where 0 = the obstacle does not exist, 1 = area for concern (i.e., the obstacle exists but is manageable), 2 = urgent intervention (the obstacle creates significant difficulties for doing business) and 3 = the obstacle makes future business development and activity impossible. A similar approach is found in Hasić (2001).

where:

$$y = \begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_p \end{bmatrix},\ f = \begin{bmatrix} f_1 \\ f_2 \\ \vdots \\ f_m \end{bmatrix},\ u = \begin{bmatrix} u_1 \\ u_2 \\ \vdots \\ u_p \end{bmatrix},\ B = \begin{bmatrix} \beta_{11} & \beta_{12} & \cdots & \beta_{1m} \\ \beta_{21} & \beta_{22} & \cdots & \beta_{2m} \\ \vdots & \vdots & \ddots & \vdots \\ \beta_{p1} & \beta_{p2} & \cdots & \beta_{pp} \end{bmatrix}$$

B represents the matrix of factor strain or the filling matrix whose elements β_{ij} are called factor coefficients or factor strains of the i variable with the j factor, and they represent the influence that j factor has on the i variable. f stands for m-dimensional vector of common factors and u stands for p-dimensional vector of specific factors.

The research results are presented in the following part of the paper.

4.2 Research Results

It is known that in BiH currently only few manufacturing companies are being established, as most new SMEs are service companies, most commonly trading businesses. This is why our research was focused solely on manufacturing SMEs, even though the majority of the sample companies are in fact micro-enterprises, and most of them have up to 10 full-time employees.[5] Owners and managers were asked about the difficulties they encountered in establishing and operating their business, and whether there have been any significant changes in the recent period. There were also questions about crucial obstacles which they faced in their day-to-day operations. Some questions related to the specific experience of each company, while others were about perceived changes in the general atmosphere governing their environment. For the purposes of this paper, we present the textual interpretations of the main results gleaned from the 140 questions which constituted the questionnaire. Our research reveals that management comprised

5 The European Commission adopted recommendations concerning the definition of SMEs: micro enterprises have 0-9 employees, small enterprises 10-49 and medium enterprises 50-250 (Commission Recommendation, 96/280/EC: 4). This provides a clear global framework regarding all the measures directed towards micro-, small- and medium-sized enterprises.

a sole director in 62 percent of the businesses, indicating that in the majority of cases ownership and management functions were not separated.

Fifty-one percent of the respondents stated that their company aimed to export goods. Fifty-five percent claimed an increase in exports in 2009, as against 45 percent who reported that their export trade had decreased. However, using the χ^2 dependability test with a 1 percent significance level, we concluded that exports do not affect the business results of manufacturing SMEs in BiH (the calculated value of the χ^2 test was 1.80 and the table value 9.21). As 86 percent of the respondents stated that government policy does not stimulate export-orientated enterprises, we also concluded that the BiH institutions are badly organized in this regard. Of particular concern was the claim by all the respondents that there were no appropriate credit loans aimed at export-orientated enterprises and, equally worryingly, 92 percent stated that they did not have support for research and development. It is significant that 63 percent of the respondents did not have any certificates of quality management standards, while the remainder had mainly ISO 9001, HACCP, or ISO 14001. However, using the χ^2 dependability test with a 1 percent significance level, we concluded that having a certificate of quality management standards did not affect overall business results in manufacturing SMEs in BiH (the calculated value of the χ^2 test was 0.84 and the table value 9.21).

Asked if they belonged to a cluster, the great majority of respondents (96 percent) answered no, despite the fact that joining a cluster is one of the recognized methods for advancing new or existing enterprises. Belonging to a cluster opens up possibilities of various combinations of business cooperation between the owners of micro and small companies, as well as efficient use of available resources within the given surroundings. Two extremely worrying findings were that 69 percent of the respondents said their companies did not have a website and 21 percent stated that their business was not subject to audit. Concerning the difficulties faced by manufacturing SMEs in following innovations, we found that 54 percent claimed they could do so without much difficulty, 33 percent

said they did have difficulty doing so, while just 8 percent said they followed innovations easily. Five percent of the respondents were unable to provide an answer.

In order to ascertain whether the business environment in BiH stimulates entrepreneurial development, the respondents were asked to compare conditions for starting a business in another city, canton or entity with those in their home territory. Forty-eight percent stated that starting a new enterprise in another region would be much harder, 43 percent felt conditions were similar everywhere, while 9 percent thought that starting something new elsewhere would be slightly harder.

Encouraging information was that 75 percent of the respondents had made profit and progress in their business, compared with 10 percent on the edge and 15 percent who had had losses. Regarding ownership structure, a large number (74 percent) stated that one person held more than 50 percent of the stocks, while only 10 percent had a supervisory board.

Based on the analysis of the results of our research, we have made the following classification of the internal and external obstacles hindering manufacturing SMEs in BiH:

- Zone A: Obstacles create considerable difficulties for doing business (average grade 1.51-2.5);
- Zone B: Obstacles create certain difficulties for doing business - Concern Zone - (average grade 0.51-1.5);
- Zone C: Obstacles do not exist (average grade ≤ 0.5).

Using the average grade criterion we also rated the obstacles identified in each category, from the most severe downwards, in a descending order (Table 3).

Table 3: *Classification of the Identified Business Obstacles*

Rank	Zone/Obstacles
ZONE A	
1	Bureaucracy
2	Interest Rates
3-4	Time Taken to Enforce Court Orders
3-4	Issuing of Building Permits (Urban and Construction Permits, etc.)
5	Corruption
6	Lack of Financial Stimulation/Government Support for the Development of Manufacturing Enterprises
7-8	General Attitude of Government Towards the Private Sector
7-8	The Gray Economy and Unfair Competition
9-10	Time Lapse between a Trial Date Being Set and Judgment Being Passed
9-10	Time Taken for Legal Trials to Begin
11	Lack of Measures to Stimulate the Export Trade
12	Lack of Government Measures to Stimulate Employment
13	Client Payment Factors
14-15	Quality of Workforce
14-15	Conditions for Obtaining Financial Support
ZONE B	
1	Lack of Credit History
2-3	Social and Health Insurance Payments
2-3	Quality of Road Networks
4	Difficulties in Long-term Credit
5	Registration of Real Estate
6	Trust in Partners
7	Deadlines for Credit Payments
8	Lengthy Processing of Requests to Banks
9	Lack of Institutions for Getting and Changing Qualifications
10	The Division of Economic Areas in BiH
11-12	Lack of Personal Capital
11-12	Difficulties in Securing Bank Guarantees
13	Level of Development of Financial Market
14	Finding the Right Partner for Business
15-16	Transparent Partners' Business Practices
15-16	Quality and Costs of Telecommunications
17	Costs of Workforce
18-19	Work Productivity
18-19	Gathering of Documents Needed for Registration
20	Legal Counseling
21	Registration of Rights to Property
22-23	Registration of an Enterprise in Court
22-23	Motivation of Workforce
24	VAT Rate
25-27	Training for Using Advanced Information and Communication Technologies
25-27	Financial and Tax Advice
25-27	Education for Increasing Knowledge and Skills of Entrepreneurs and Managers

28	Human Resources Training and Management
29	Promotion of New Enterprises – Start-up
30-32	Registration of Property
30-32	Customs Permits and Technical Control of Imports
30-32	Complicated Taxing System
33	Difficulties in Short-term Credits
34	Promotion
35-38	Promotion of Businesswomen
35-38	Customs Permits and Technical Control of Exports
35-38	Complicated Procedure for VAT Returns
35-38	Working Atmosphere
39-40	Issuing of Permits Needed for Technical Acquisition of Business Premises
39-40	Issuing of Ownership Papers at Property Registry Office
41-43	Quality and Costs of Port Services
41-43	Computer Literacy
41-43	Business Planning
44-46	Workforce Availability
44-46	Network of Regional and Local Business Centers
44-46	Availability of Air Transport
47-48	Research Sector and Development within Enterprise
47-48	Preparation of Papers for Export Trade
49-50	Procedure for Issuing Statistical Number
49-50	Functioning of Payment Systems
51	Technology Parks
52-53	Procedure for Issuing Customs Number
52-53	Issuing of Documents from the Enterprise Register
54-55	Quality and Costs of Rail Transport
54-55	Preparation of Papers for Import Trade
56	Quality System and Certificates (ISO 9000, HACCP)
57	Counseling Services, Research and Help
58-59	Water Supplies and Quality
58-59	Procedure for Issuing VAT Number
60	Business Incubators
61	Availability of Information Technology
62	Availability of Banking Services
63	Lack of Specific Knowledge and Skills in the Management of Personal Businesses
64	Focusing on Local Markets
65	Resources and Suppliers (Connection with Retailers)
66	Strength of Convertible Mark Currency
ZONE C	
1	Procedure for Making an Official Company Stamp

Source: Authors' summarization based on the questionnaire.

Having classified the obstacles, we now identify the key factors pertaining to the external and internal obstacles to developing manufacturing businesses in

BiH, using factor analysis. The factor analysis was conducted separately for the two types of obstacle, and in Figures 3 and 4 we present a selection of the average grades for the variables which were included in the factor analysis, as representative for external and internal obstacles.

Due to the large number of identified external obstacles (Table 3) for our factor analysis we selected the most representative obstacles with average grade higher than 1.

Figure 3: *Average Grades for Selected External Obstacles*

Source: Authors' summarization based on the questionnaire.

Figure 4: *Average Grades for Selected Internal Obstacles*

Source: Authors' summarization based on the questionnaire.

4.2.1 The Results of Factor Analysis for the External Obstacles

Our factor analysis application is based on the Kaiser-Meyer-Olkin (KMO) measure for sample adequacy. The KMO value is 0.786. Six different factors have been extracted, according to the method of seeking the main elements as the method for extraction. We took the eigenvalues added to the factors higher than 1 as the selection criterion for the number of factors extracted. The percentage of the explained variance within these six factors is approximately 72 percent. For a clearer overview, only those factor loadings with a value higher than 0.5 are

shown. Rotation was applied using the Varimax rotation method with Kaiser's normalization. Table 4 shows the results.

Table 4: *Results of Factor Analysis After Rotation for External Obstacles*

Factor	Factor loading	Variables included in the factor	Strength of factors in explaining variance of variables
F1 (Legal Aspects of Property Protection)	0.860	Registration of Property	74%
	0.858	Registration of Rights to Property	74%
	0.767	Registration of Real Estate	59%
F2 (Institutional Infrastructure and Infrastructure Outside Institutions)	0.766	Quality of Road Networks	59%
	0.695	Bureaucracy	48%
	0.673	Quality and Costs of Telecommunications	45%
	0.672	Corruption	45%
F3 (Attitude of Administration towards Manufacturing SMEs)	0.829	Registration of an Enterprise in Court	69%
	0.799	Customs Permits and Technical Control of Imports	64%
	0.791	Gathering of Documents Needed for Registration	63%
F4 (Court and Legal Barriers)	0.878	Time Taken to Enforce Court Orders	77%
	0.825	Time Lapse between a Trial Date Being Set and Judgment Being Passed	68%
	0.604	Issuing of Building Permits (Urban and Construction Permits, etc.)	36%
F5 (Institutional Framework and Regulations)	0.803	Lack of Financial Stimulation/ Government Support for the Development of Manufacturing Enterprises	64%
	0.802	Lack of Government Measures to Stimulate Employment	64%
	0.544	Quality of Workforce	30%
F6 (Taxation and Payments)	0.696	VAT Rate	48%
	0.595	Social and Health Insurance Payments	35%

Source: Authors' calculations based on the questionnaire.

The results confirm the justification for using factor analysis when identifying external obstacles to the development of SMEs in BiH. The interpretation of these factors is largely based on external obstacles found within the framework of one homogeneous group of variables with a common denominator. While interpreting the factors, besides the results of the factor analysis, we have also included a

correlation analysis of subject variables.[6] Thus the first factor, Legal Aspects of Property Protection, explains 74, 74 and 59 percent of the variance variables Registration of Property, Registration of Rights to Property, and Registration of Real Estate, respectively. Concerning correlation between variables, the highest correlation (0.935) within the first factor is between the variables Registration of Property and Registration of Rights to Property. The second factor, Institutional Infrastructure and Infrastructure Outside Institutions, explains 59, 48, 45 and 45 percent of the variance variables Quality of Road Networks, Bureaucracy, Quality and Costs of Telecommunications, and Corruption, respectively. Within the second factor, the highest correlation (0.676) is between the variables Quality of Road Networks, and Quality and Costs of Telecommunications. The third factor, Attitude of Administration towards Manufacturing SMEs, accounts for 69, 64 and 63 percent of the variances of the variables Registration of an Enterprise in Court, Customs Permits and Technical Control for Imports, and Gathering of Documents Needed for Registration, respectively. For the third factor, the highest correlation is between the variables Registration of an Enterprise in Court and Gathering of Documents Needed for Registration. The fourth factor, Court and Legal Obstacles, accounts for 77, 68 and 36 percent of the variance variables Time Taken to Enforce Court Orders, Time Lapse between a Trial Date Being Set and Judgment Being Passed, and Issuing of Building Permits (Urban and Construction Permits, etc), respectively. Within the fourth factor, the highest correlation (0.924) is between the variables Time Taken to Enforce Court Orders and Time Lapse between a Trial Date Being Set and Judgment Being Passed. The fifth factor, Institutional Framework and Regulations, explains 64, 64 and 30 percent of the variance variables Lack of Financial Stimulation/ Government Support for the Development of Manufacturing Enterprises, Lack of Government Measures to Stimulate Employment, and Quality of Workforce, respectively. Within the fifth factor, the highest correlation (0.588) is registered between the variables Lack of Financial Stimulation/Government Support for the Development of Manufacturing Enterprises and Lack of Government Measures

6 The correlation matrix is not presented in this paper owing to the large volume of results.

to Stimulate Employment. Finally, the sixth factor, Taxation and Payments, explains 48 and 35 percent of the variance variables VAT Rate and Social and Health Insurance Payments.

Table 5 shows the factor scores.

Table 5: *Factor Scores (External Obstacles)*

Variables	*Factors*					
	1	2	3	4	5	6
Corruption	-0.003	0.340	0.000	-0.031	-0.150	-0.071
Bureaucracy	-0.055	0.337	-0.052	0.113	-0.160	-0.086
Quality of Road Networks	-0.049	0.280	-0.066	-0.097	0.077	0.083
Quality and Costs of Telecommunications	0.005	0.366	-0.090	-0.152	0.016	0.018
Gathering of Documents Needed for Registration	-0.119	-0.043	0.371	-0.003	-0.031	0.039
Registration of an Enterprise in Court	-0.070	-0.079	0.384	-0.011	-0.036	0.035
Issuing of Building Permits	0.078	-0.209	-0.087	0.270	0.128	0.112
Registration of Real Estate	0.337	-0.130	-0.157	0.100	-0.013	0.103
Registration of Property	0.394	0.030	0.021	-0.149	-0.106	-0.029
Registration of Rights to Property	0.393	0.052	0.020	-0.109	-0.107	-0.148
VAT Rate	-0.032	0.107	0.049	-0.144	-0.081	0.558
Social and Health Insurance Payments	0.098	-0.106	-0.121	-0.021	0.148	0.471
Time Lapse between a Trial Date Being Set and Judgment Being Passed	-0.058	0.011	-0.035	0.442	-0.080	-0.133
Time Taken to Enforce Court Orders	-0.104	0.008	-0.056	0.493	-0.085	-0.108
Customs Permits and Technical Control of Imports	0.008	-0.038	0.438	-0.151	-0.099	-0.092
Import Stimulating Measures	0.017	0.011	0.169	0.025	0.042	-0.145
Lack of Government Measures to Stimulate Employment	-0.102	-0.107	-0.026	-0.067	0.467	0.135
Quality of Workforce	0.138	-0.003	-0.007	-0.029	0.265	-0.481
Interest Rates	-0.167	0.124	0.045	0.063	0.128	-0.020

Source: Authors' calculations based on the questionnaire.

This table shows that the highest coefficient scores are of those which we have placed within the first factor, and we can reach similar conclusions for the other factors.

4.2.2 The Results of Factor Analysis for the Internal Obstacles

Similarly to the identification of external obstacles, KMO statistics suggest the value of implementing factor analysis. The KMO value of the statistics is 0.896. Two factors have been extracted using the procedure of main components as the method of factor extraction. Again, we took the eigenvalues added to the factors higher than 1 as our selection criterion for the number of factors extracted. The percentage of the explained variance within these two factors is approximately 70.2 percent. For a clearer overview, we show only the factor loadings which are higher than 0.5. Table 6 shows the results of the factor analysis after rotation, which was carried out using the Varimax method with Kaiser's normalization.

Table 6: *Results of Factor Analysis After Rotation for Internal Obstacles*

Factor	Factor loadings	Variables included in the factor	Strength of factor in explaining the variance of variables
F1 (Counseling Services)	0.894	Legal Counseling	80%
	0.859	Financial and Tax Advice	74%
	0.838	Promotion	70%
	0.824	Business Planning	68%
	0.806	Human Resources Training and Management	65%
	0.634	Availability of Information Technology	40%
F2 (Entrepreneurial Education and Availability of Skills)	0.896	Education for Increasing Knowledge and Skills of Entrepreneurs and Managers	80%
	0.875	Training for Using Advanced Information and Communication Technologies	77%
	0.831	Lack of Specific Knowledge and Skills in the Management of Personal Businesses	69%
	0.771	Computer Literacy	59%
	0.686	Research Sector and Development within Enterprise	47%
	0.673	Focusing on Local Markets	45%

Source: Authors' calculations based on the questionnaire.

Table 7: *Factor Scores (Internal Obstacles)*

Variables	*Factors*	
	1	2
Legal Counseling	0.289	-0.161
Financial and Tax Advice	0.241	-0.108
Promotion	0.256	-0.123
Business Planning	0.221	-0.082
Human Resources Training and Management	0.199	-0.054
Availability of Information Technology	0.113	0.021
Computer Literacy	-0.085	0.217
Focusing on Local Markets	-0.061	0.180
Lack of Specific Knowledge and Skills in the Management of Personal Businesses	-0.106	0.244
Education for Increasing Knowledge and Skills of Entrepreneurs and Managers	-0.152	0.289
Training for Using Advanced Information and Communication Technologies	-0.127	0.267
Promotion of New Enterprises – Start-up	0.054	0.064
Promotion of Businesswomen	0.067	0.030
Research Sector and Development within Enterprise	-0.018	0.153

Source: Authors' calculations based on the questionnaire.

The results confirm the justification for using factor analysis in the identification of internal obstacles to the development of manufacturing SMEs in BiH. The first factor, Counseling Services, explains 80, 74, 70, 68, 65 and 40 percent of the variance variables Legal Counseling, Financial and Tax Advice, Promotion, Business Planning, Human Resources Training and Management, and Availability of Information Technology, respectively. Regarding correlation of the variables, the highest correlation (0.804) within the first factor is between the variables Legal Counseling and Promotion. The second factor, Entrepreneurial Education and Availability of Skills, explains 80, 77, 69, 59, 47 and 45 percent of the variance variables Education for Increasing Knowledge and Skills of Entrepreneurs and Managers, Training for Using Advanced Information and Communication Technologies, Lack of Specific Knowledge and Skills in the Management of Personal Businesses, Computer Literacy, Research Sector and Development within Enterprise, and Focusing on Local Markets, respectively. The highest correlation (0.871) within the second factor is registered between the

variables Education for Increasing Knowledge and Skills of Entrepreneurs and Managers and Training for Using Advanced Information and Communication Technologies. Table 7 shows the factor scores and it is clear that the first and second factors have high coefficient scores with the variables that explain the given factors.

5 Concluding Remarks and Recommendations

The primary and secondary research described in this paper leads us to the conclusion that it confirms the obstacles to SME development in BiH, which have previously been identified by the World Bank and the European Commission. Throughout the paper, it is evident that BiH lags behind other countries in the region in almost all aspects. In addition, there are no concrete institutional or legislative reforms in place aimed at systematic solutions for creating the stimulating environment needed for the development and growth of manufacturing SMEs.

The research has also confirmed that in BiH there are numerous obstacles to the development of manufacturing SMEs in particular. Of these the most significant external obstacles are: Bureaucracy, The Time It Takes to Implement Legal Judgments, The Issuing of Building Permits, Corruption, Lack of Financial Stimulation/Government Support for the Development of Manufacturing Enterprises, The Time Lapse between a Trial Date Being Set and Judgment Being Passed, Lack of Government Measures to Stimulate Employment, Quality of the Workforce, Quality of Road Networks, Social and Health Insurance Payments, Registration of Real Estate, and Quality and Costs of Telecommunications. Our research has also identified external obstacles highlighted by the World Bank, OECD and European Commission, which we have described in the second part of this paper. We suggest that business decision-makers and government administrators at all levels intervene as a matter of urgency to eliminate these obstacles, or at least reduce them radically in order to create a stimulating

business environment in BiH, as has already been done in other countries in the region. This is important also in relation to the Bosnian approach to Euro-Atlantic integration.

In addition to the external obstacles, our research confirms that in BiH there are numerous internal obstacles, which have not been researched by the World Bank, OECD, European Commission or other relevant organizations. These are the internal obstacles, listed in the order of their importance to entrepreneurs: Legal Counseling, Financial and Tax Advice, Human Resources Training and Management, Education for Increasing Knowledge and Skills of Entrepreneurs and Managers, Training for Using Advanced Information and Communication Technologies, Promotion of New Enterprises - Start-up, Promotion, Promotion of Businesswomen, Business Planning, Computer Literacy, Research Sector and Development within Enterprise, Availability of Information Technology, Lack of Specific Knowledge and Skills in the Management of Personal Businesses, and Focusing on Local Markets. These internal obstacles should also be considered by business decision-makers, with a view to improving the competitiveness of manufacturing SMEs. Entrepreneurs and managers should work to eliminate the internal obstacles, besides taking action to reduce external obstacles. Using representative organizations, such as chambers of commerce or business associations, they should try to influence the public institutions which are the main source of the external obstacles and persuade the BiH government to eliminate these barriers. We recognize that identifying the external and internal obstacles to the development of manufacturing SMEs will not solve all the problems of the Bosnian economy, but we believe it can help improve the business environment and make everyday transactions easier for our entrepreneurs. At the same time, it will create the conditions to speed up direct foreign investments into BiH.

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