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# THE INFLUENCE OF THE BUSINESS ENVIRONMENT ON THE MICROECONOMIC COMPETITIVENESS OF THE DAIRY INDUSTRY IN BOSNIA AND HERZEGOVINA

## ABSTRACT

In this paper, the authors explore the impact of the business environment on the microeconomic competitiveness of companies in the dairy industry sector in Bosnia and Herzegovina. The business environment in which these enterprises operate may be a motivating force or, on the other hand, a limiting factor of their progress. The study examines the variables of the business environment and the variables of the microeconomic competitiveness and their interconnection. The results of the empirical research confirm the earlier findings and results of similar research on the unfavorable business environment in Bosnia and Herzegovina. Complete statistical data processing was done on a sample of 26 enterprises (84% of the total population) operating in that sector, by the method of correlation analysis and multiple linear regression. In that sense, the influence of movement, tax rate, the number of procedures for the establishment of the company, the time of export, the time of import, and the number of procedures for obtaining building permits were examined as indicators of an independent variable, on the movement of microeconomic competitiveness as a dependent variable by means of the multiple regression analysis. For this purpose, one central and three working hypotheses, as well as 3 linear regression models, are set up, which will help in deciding or rejecting the set hypotheses.

**Keywords:** Business environment, microeconomic competitiveness, the dairy sector, Bosnia and Herzegovina (B&H)

## 1. Introduction

The subject of this research is the analysis of strengthening the microeconomic competitiveness (observed through the indicators of profitability) of companies within the dairy industry of Bosnia and Herzegovina ("B&H"). Namely, in this paper, we

will try to examine the role and importance of the business environment in strengthening the microeconomic competitiveness. In a modern business environment, it is very important for institutions to determine how the business environment enhances the microeconomic competitiveness, which directly affects the level of productivity of the company.

The main goal of the paper is to determine how the business environment within the dairy sector affects the company's operations and their business performance and competitiveness.

The central research hypothesis reads: *A favorable business environment is positively related to strengthening the microeconomic competitiveness of companies in the dairy industry in B&H.* The process of food production and processing for each developed economy is a special sector of the economy. The dairy industry in B&H was one of the fastest growing sectors in the last decade. When the prosperity and fast development of this industry should have taken place, the import of milk and dairy products to Croatia was banned in 2013 when Croatia became a member of the European Union (EU). For the dairy industry of B&H, the month of June 2015 presents a new era regarding business with the EU. This shift and the European Union's consent for B&H to export heat-treated milk and dairy products to EU countries are proof of a quality action plan, as well as of the ambition of domestic producers to harmonize their production with EU requirements.

For B&H, competitiveness also has an export dimension, given the limited size of the market. Strategic positioning within the EU internal market is important not only for future prosperity but for future EU membership. In this, the role of foreign direct investment is irreplaceable. The opportunity lies in positioning B&H in the future as a recognizable producer, integrated into networks of multinational companies, based on high-tech processes and creation of recognizable "brands".

## 2. Literature Review

An overview of the current literature shows that the problems of the competitiveness of the dairy industry were rather neglected, although the increase in productivity and positive business performance in the most developed countries was emphasized as a crucial factor in maintaining a competitive advantage. In order to take advantage of the positive effects and to circumvent the negative effects of joining the EU market, it is necessary to create a favorable business environment that facilitates the operation of domestic enterprises and in this way stimulates their greater competitiveness.

Lower production costs provide greater competitiveness. The competitiveness of a company is a measure of the ability of the company to produce

goods and services that pass the international market test in free and equal market conditions while maintaining and increasing the long-term business success and value of the company (OECD, 2001). Holman et al. (2006) state that the competitiveness of producers is, in fact, ensuring continuity in the dairy sector (measured through the cost of production). Džafić and Terzić (2011) point out that microeconomic competitiveness represents the relative efficiency of the company to sell its products and services on the market where international competition is present, while the macroeconomic competitiveness implies the ability to generate higher factor incomes under conditions when domestic enterprises are exposed to the direct impact of international competition.

The performance of companies in this industry can improve only if problems that affect the strengthening of the microeconomic competitiveness are properly addressed. The business environment is still burdened by various administrative barriers at different levels of government, Džafić, Z. (2006). Mičić (2015) shows in his research the connection between the entrepreneurial environment and competitiveness. According to most authors, MVTEO Christie (2001), Hadziomeragić et al. (2007), Bajramović et al. (2010), Džafić, Z., Bejić, J. (2012), the most important limiting factor for the development of the economic and therefore the dairy sector is the institutions. Many institutions have been established, but the problem is that their competencies are not clearly defined, and no adequate means for sustainable functioning are foreseen, so that the institutions are helpless or put in a "stalemate position" (Džafić, 2015). That is why their existence is considered to be an excessive burden and a large number of stakeholders would gladly abolish the institutions (Foreign Trade Chamber of B&H, 2013).<sup>1</sup>

The task of the company within the dairy industry of B&H is to strengthen their export potentials and their continuous improvement, which brings them closer to the European Union economy. Mahmutović (2010) concludes that if B&H companies want to play a significant part in the international market, especially the EU market, they must urgently accept the principles and ways of doing business in European and world companies.

Porter (1990) points out that the theory of competitive advantages suggests that countries do not compete in the international market, but companies. For this reason, strengthening the microeconomic

competitiveness is a key parameter in improving the performance of dairy industry companies. The productivity of the land is ultimately determined by the productivity of its companies<sup>2</sup> and it increases with the operational effectiveness of its activities and the adoption of the best global practices (Porter, 2008). By stimulating and strengthening the export policy and by creating an adequate institutional system for companies in the dairy industry, it is ensured that they strengthen their microeconomic competitiveness and improve their productivity.

Starting from the Porter model, (Porter, 1990), the degree of competitiveness of the manufacturing industry will be influenced by numerous factors from the macro and microspheres of the activity of manufacturing enterprises. To what extent a dairy company is capable of achieving and maintaining its microeconomic competitiveness depends primarily on the quality of its strategies, especially the development of its innovations and the improvement of technological facilities. On the other hand, its microeconomic competitiveness is determined also by the government institutions and policies.

The competitiveness of milk and dairy producers is weakened by the slow adoption of legislation, which is a prerequisite for obtaining export licenses. The requirements of the European Union related to the harmonization of measures on the export of animal origin products resulted in the year 2015 with four accredited labs and eleven methods of testing the quality of animal origin products.

“In Ireland pasture-based dairying, based on the efficient conversion of grazed grass into milk can be competitive within the EU. ... At the processing level, increased efficiency in commodity processing, higher margin product development and the evolution of milk payment systems to reflect the true product value of supplies received will be required” (Dillon et al., 2008).

According to Tacke (2009), the mean size of micro enterprises shows a declining trend in the EU. Small and medium enterprises are increasing in size very slightly while for large enterprises the change in mean size is cyclical, but on average strongly increasing. The average size of a large enterprise dropped between 2000 and 2003 but has risen onwards in the last 5 years. Large companies have grown in the last couple of years and they tend to merge and acquire companies that do interesting innovations. The main innovators in the European

dairy industry are the large dairy companies (e.g. Arla, Danone, Müller, BSA Lactalis, Dairy Crest or Campina), suppliers of ingredients (Danisco, Chr Hansen, DSM) and packaging (Tetra Pack) in Europe. The large firms have a share of over 60% in the industry's total turnover and employment and a share of over 50% in innovations.

According to Jansik and Irz (2015), in the post-quota era, competitiveness has become the key determinant of success of dairy sectors within the EU. To understand the evolution of the sector, they identified key determinants of the competitiveness of national dairy chains by combining an analysis of competitiveness indicators with case-studies in selected EU countries. Around the Baltic Sea region, they have found steady productivity growth on dairy farms in the old Member States, and no evidence that the newer Member States are managing to reduce their productivity gap (Jansik, Irz, 2015).

### 3. Research Method

#### 3.1 Research Design

Based on an analysis of the current research on the competitiveness of the dairy industry, a potential research question has emerged: Does the behavior of companies, through the improvement of the business environment, reflect the future trends of improving the microeconomic competitiveness in B&H through their financial indicators?

In pursuing research on this topic, the objectives pursued in carrying out the research were also defined. The objectives are divided into the general goal and the operational goals of the research process. The general objective of the research is to analyze the factors that determine the microeconomic competitiveness of companies in the dairy industry and the proposal of measures that will contribute to strengthening the microeconomic competitiveness.

The achievement of the general goal can be realized through the following operational goals of the research process: identify the company's reference list within the dairy industry of B&H, identify key obstacles in strengthening the competitiveness of enterprises within the dairy industry, assess the position and importance of the institutional framework for assessing the quality of milk and dairy products and the support of the institutional framework for entry into the EU market, to explore the correlation between the business environment and the situation in the dairy industry of B&H, to assess the

state of development of the business environment in B&H and its contribution to the achievement of the business benefits of dairy companies.

Due to aggression in B&H, it could be said that B&H has a poor starting position compared to its competitors. There had been certain progress in the development of the processing industry shortly after the war, however, the period of economic crisis brought new problems for the B&H manufacturing industry. According to research conducted for the period from 2005 to 2015, industrial production increased by 2.5%, while the annual export growth was 3.5%. For example, the share of industrial production in GDP increased by 1.6% and went from 17% in 2005 to 18.6% at the end of 2015. It is similar to the indicators of the manufacturing industry, which is the backbone of the export of goods, and within which the average annual production growth rate of 3.9% was registered in the same period of time, while its share in GDP increased from 9.9% in 2005 to 11.6% of the GDP at the end of 2015.

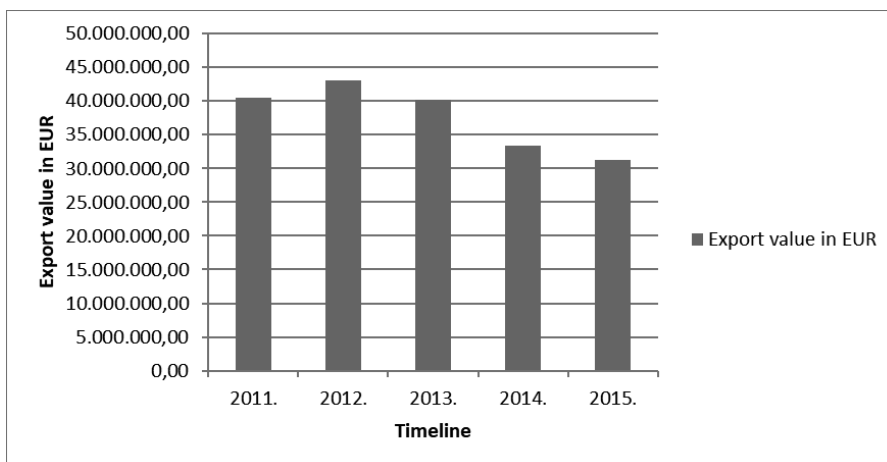
Employment in the manufacturing industry was reduced from 144.1 thousand in 2005 (22.3% of total employees in B&H) to 139.7 thousand (19.6% in total employment) in 2015.<sup>3</sup> According to the industrial index competitiveness of the CIP Competitiveness Industrial Performance Index<sup>4</sup> for 2013, which measures industrial competitiveness in the world, B&H is ranked 86th.

By analyzing the previous table and by detailed interpretation of the CIP index, it can be concluded that the key reasons for the weak ranking are B&H's

underdevelopment of the industrial base, i.e. the low share of the manufacturing industry in the GDP of about 11.6%, and the added value in the manufacturing industry per capita of \$ 325 per the 2005 course. The second parameter, based on which our country is significantly lagging in relation to the countries of the region, is the share of medium and high-tech products in the export of about 25%, while the regional average is 35%.

In Figure 1, a table view of the export of milk and dairy products is shown in kg for B&H. Although in the period from 2005 to 2010 there was an increase in exports and an increase in the market share in exports of the milk and dairy sector, in the period from 2011 to 2015, the situation of the Republic of Croatia changed considerably. With an initial export value of 66,357,403.27 kg, the value in 2012 increased to 75,761,921.95 kg. In the next year, (in 2013 when the Republic of Croatia joined the EU), it reduced the value of exports by 66,284,603,90 kg. The years 2014 and 2015 also saw a decline in exports of milk and dairy products. As regards export expressed in terms of the weight (kg) of all products, B&H was the most competitive in the domain of export of products 0401 - Milk and cream, unconcentrated and not containing added sugar or other sweeteners. Our country is the least competitive in the export of products 0405 - Butter and other fats and oils obtained from milk; milk spreads. For an easier insight into the movement of export in the mentioned time series from 2011 to 2015, a graphic representation follows.

Figure 1 Export of milk and dairy products in EUR, 2011-2015



Source: Authors' calculation

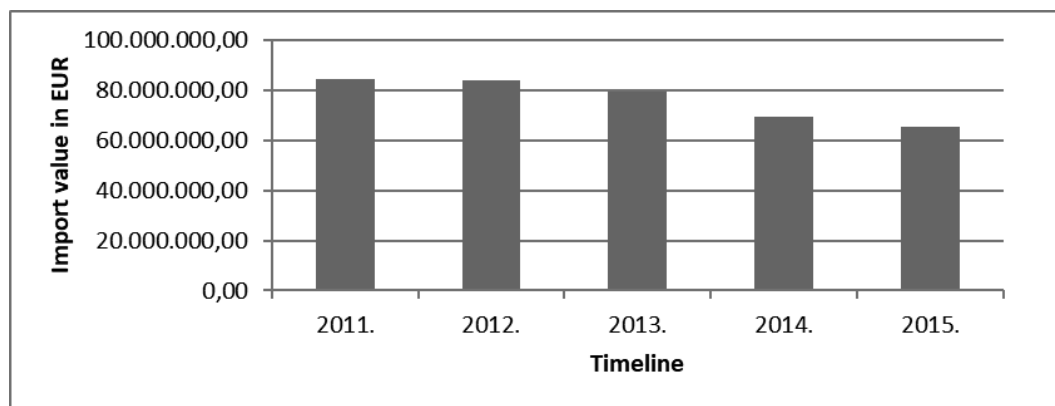
Analysis of the data for the export of milk and dairy products expressed in EUR shows the same conclusion that B&H is the most competitive in the domain of the export of the product 0401 - Milk and cream, unconcentrated and without added sugar or other sweeteners, and the least competitive in the export of the product 0405 - Butter and other fats and oils obtained from milk; milk spreads.

Next, Figure 2 shows the total import of milk and dairy products in EUR in B&H in the period 2011-2015. Import, as well as export, recorded a constant decline in value reported in EUR. This situation is in favor of domestic producers, because of reduced imports, more domestic products are bought and used.

The initial value of imports in EUR in 2011 was 84,330,640.11 EUR. If we compare this value with the import value of 65,488,581.86 EUR in 2015, we

will see that the same has decreased by 22%. By analyzing individual products, it can be concluded that B&H imports mostly cheese, the percentage value of cheese imports in 2011 was 32.68%, while in 2015 the value of cheese imports increased to 46.08% (value of imports in the sum decreased). B&H imported the smallest amount of butter in 2011, which is 10.68% in 2011, and 9.35% in 2015. Comparing the realized import and export values, and analyzing the percentage changes in imports or exports, the following conclusion was reached. Import coverage by exports in 2015 is 52.2%. The decrease in exports in the period of 2015 compared to 2011 is 22%, and the decrease in imports in the same observed period amounted to 22%. In order to gain an easier insight into the movement of the imports expressed in EUR, a graphic representation follows.

Figure 2 Import of milk and dairy products in EUR, 2011-2015

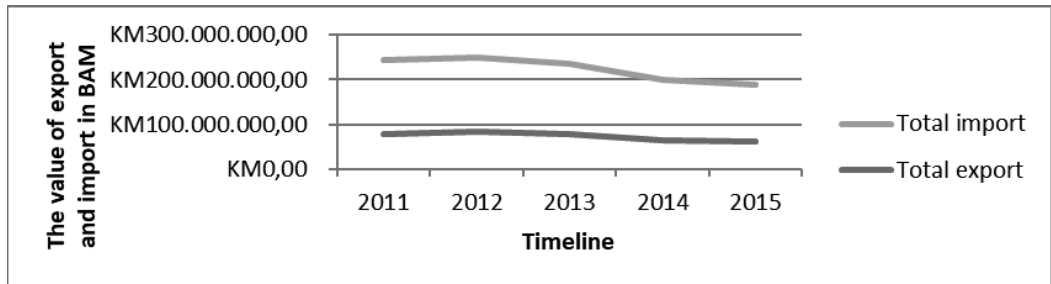


Source: Authors' calculation

By analyzing the previous graph, it can be concluded that B&H has made progress in importing milk and dairy products because the value of imports declined over the years. The key export market for B&H is Montenegro. The value of exports in 2015 increased by 1.59 million EUR compared to 2014. Given that imported cheese is in the amount of

30.17 million EUR, one step should be made regarding the substitution of cheese imports. Since September 2015, B&H has again been given the "green light" to export to the EU market. Figure 3 shows the relationship between imports and exports in the period 2011-2015.

Figure 3 Relationship between imports and exports in the period 2011 - 2015, in BAM



Source: Authors' calculation

From the figures, it can be seen that imports are at a much higher level than the value of exports expressed in BAM. It is a sad story that a prosperous sector, such as dairy, is not being sufficiently exploited due to bad economic policymakers.

### 3.2 Variables of Research

Defined problems of research in the field of work involve an analysis of the microeconomic competitiveness, which is seen through profitability indicators of enterprises within the dairy industry of B&H. In this context, the defined variables involve examining the variables of the business environment in relation to the variation of microeconomic competitiveness. In a modern business environment, it is very important for institutions to determine how the business environment enhances the microeconomic competitiveness, which directly affects the level of productivity of the company.

The variables were examined according to one main research hypothesis and three working hypotheses. Therefore, for the research of the central research hypothesis, an independent variable represents the business environment, and the dependent variable represents the microeconomic competitiveness of the company. The dependent variable, the microeconomic competitiveness, was verified with the help of three working hypotheses. According to a survey conducted by Liargovas and Skandalis (Liargovas, Skandalis, 2015), the dependent variable was defined by value: return on sales, return on assets and return on capital.

In order to verify the first working hypothesis, the independent variable is the business environment, and the dependent variable is the return on sales of

enterprises within the dairy industry of B&H. The second working hypothesis examines the relationship between the independent variable, i.e. the business environment, and the return on assets, while the third working hypothesis examines the relationship between business environment as the independent variable and the return on capital.

After checking the impact of business environment as the independent variable on the dependent variable, i.e. microeconomic competitiveness, viewed as the return on sales, return on assets and return on capital for all companies within the dairy industry, the aggregate impact of the independent variable, i.e. business environment, on microeconomic competitiveness as the dependent variable is analyzed by means of multiple linear regression.

### 3.3 Research Indicators and Hypotheses

The central research hypothesis reads:

H: *A favorable business environment is positively related to strengthening the microeconomic competitiveness of companies in the dairy industry in B&H.*

Defined indicators for checking the working hypotheses include the following:

The first working hypothesis:

H1: *There is a positive correlation between a favorable business environment and a return on sales of companies in the dairy industry in B&H.*

Second working hypothesis:

H2: *There is a positive connection between a favorable business environment and a return on the assets of companies in the dairy industry in B&H.*

The third working hypothesis:

H3: *There is a positive correlation between a favorable business environment and a return on company capital in the dairy industry in B&H.*

Multiple regression analysis is used to check the influence of independent variables on the movement of microeconomic competitiveness as a dependent variable. For these purposes, three linear regression models have been set up, which will help in accepting or rejecting the three working hypotheses.

$$ROSi = \beta_0 + \beta_1 SPi + \beta_2 BPopi + \beta_3 VIi + \beta_4 VUi + \beta_5 BPgdi + \varepsilon$$

$$ROAi = \beta_0 + \beta_1 SPi + \beta_2 BPopi + \beta_3 VIi + \beta_4 VUi + \beta_5 BPgdi + \varepsilon$$

$$ROEi = \beta_0 + \beta_1 SPi + \beta_2 BPopi + \beta_3 VIi + \beta_4 VUi + \beta_5 BPgdi + \varepsilon$$

Where:

ROSi - return on sales in the observed period

ROAi - return on property in the observed period

ROEi - return on capital in the observed period

SPi - tax rate in the observed period

BPopi - the number of procedures required for the establishment of the company in the observed period

VIi - export time in days in the observed period

VUi - import time in days in the observed period

BPgdi - the number of procedures required to obtain a building permit

i- observed period from 2011 to 2015

### 3.4 Sample

On the official website of the Ministry of Foreign Affairs<sup>5</sup> in the Economy category, there is a list of 31 companies that operate within the B&H dairy industry. Out of 31 companies, five were excluded from statistical processing because the information about them was incomplete. For 26 companies that were the subject of the statistical data processing, the data were complete and met the criteria to be included in the processing. The data for the analysis of the independent variable (business environment) were fully available and completed for the period from 2011 to 2015. After preliminary analysis and elimination of five companies, the number of obser-

vations was reduced to 26 enterprises (84% of the total population).

The collected data were analyzed by different types of statistical methods of research, i.e. descriptive statistical analysis and correlation analysis. Also, the analysis included a multiple linear regression analysis with the aim of assessing the factors that can contribute to explaining the impact of a favorable business environment on the microeconomic competitiveness of the company. Complete statistical data processing was done in the period from February to March 2017, by the method of correlation analysis and multiple linear regression, with the help of statistical software IBM SPSS 21.

## 4. Results and Discussion

### 4.1 Analysis of the connection between the business environment and the realized return from the sales of milk companies of B&H – The first auxiliary hypothesis

In the first step, we check the relationship between the business environment and the return on sales. In order to test the first auxiliary hypothesis, a correlation analysis was used for all enterprises. The correlation analysis crossed the value of the realized return from the sales of enterprises operating in the B&H dairy industry with the tax rate, the number of days of import, the number of days of export, the number of procedures for obtaining a building permit and the number of days for the establishment of the company.

The results of the correlation analysis (Pearson Correlation parameter value<sup>6</sup>) in this section show that the factors: tax rate, export time and number of procedures for obtaining building permits, number of procedures for establishing a company and time of import contribute very little to the connection of the business environment and the return from the sales of the dairy industry B&H. All of these indicators have a very low correlation coefficient value. Based on the previously written it cannot be confirmed that they contribute to the positive connection between the business environment and the realized returns from the sales of companies in the dairy industry in B&H.

**Table 1 Results of correlation analysis for dependent variable return on sales**

		% TAX RATE	Number of procedures for establishing a company	Time of import (days)	Time of export (days)	Number of procedures for obtaining building permits
RETURN ON SALES H1	Pearson Correlation	.036	.079	.071	.007	.018
	Sig. (2-tailed)	.692	.382	.438	.939	.845
	N	123	123	123	123	123

Source: Authors' calculation

The next step in testing the first auxiliary hypothesis is the construction of the regression model, where we define the dependent variable of return on sales, while the set of independent variables consists of the

tax rate, export time and number of procedures for obtaining building permits, number of procedures for establishing a company and time of import.

**Table 2 Results of the regression analysis for the first auxiliary hypothesis**

Correlation coefficient	Determination coefficient	Corrected coefficient of determination	Standard error estimation
.292	.085	.046	1.182

ANOVA	Sum of the square	Df-number of degrees of freedom	The middle of the square	F	P-value
Explained variability	15.190	5	3.038	2.176	.061
Unexplained variability	163.362	117	1.396		
Overall	178.552	122			

Source: Authors' calculation

Based on variance analysis of F-value and p-value ( $p < 0.05$ ), we can conclude that the regression model is not significant and representative because of the small value of the determination coefficient<sup>7</sup>. We can conclude that the dependent variable (return on sales) does not depend on the set of independent variables that represent the factors of the business environment. The results obtained dispute the first auxiliary hypothesis that there is a positive correlation between the business environment and the return on sales for companies operating within the B&H dairy industry. All of our data indicates that

there is an unfavorable business environment based on this criterion in B&H.

#### 4.2 Analysis of the connection between the business environment and the realized return on the assets of dairy companies of B&H – The second auxiliary hypothesis

In order to prove or reject the research hypothesis 2, we will do the correlation analysis and regression analysis, whose results are presented in Tables 3 and 4.



Table 3 Results of the correlation analysis for the dependent variable return on property

		% TAX RATE	Number of procedures for establishing a company	Time of import (days)	Time of export (days)	Number of procedures for obtaining building permits
Return on assets H2	Pearson Correlation	-.078	-.062	-.079	.049	-.069
	Sig. (2-tailed)	.384	.490	.374	.583	.440
	N	127	127	127	127	127

Source: Authors' calculation

In order to test another auxiliary hypothesis, a correlation analysis for all enterprises was used. The correlation analysis crossed the values of the realized return on the assets of companies operating within the B&H dairy industry with the tax rate, the number of days of imports, the number of days of exports, the number of procedures for obtaining a building permit and the number of days for the establishment of the company. The correlation coefficient  $r = -0.078$  between the return on assets and the tax rate shows a small, insignificant negative connection.

Correlation coefficients (return on assets relative to import time, number of procedures for obtaining building permits, number of procedures for estab-

lishing a company) show a small, almost insignificant negative correlation between them. The correlation coefficient between asset return and export time (days) shows a small positive relationship  $r = 0.049$ , so we can conclude that it does not show the connection between the above-mentioned variables.

The next step to test another auxiliary hypothesis is to construct a regression model where we define the dependent variable asset return, while the set of independent variables consists of the tax rate, export time and number of procedures for obtaining building permits, number of procedures for establishing a company and import time.

Table 4 The results of regression analysis for the second auxiliary hypothesis

Correlation coefficient	Determination coefficient	Corrected coefficient of determination	Standard error estimation
.230	.053	.014	.0999

ANOVA	Sum of the square	Df-number of degrees of freedom	The middle of the square	F	P-value
Explained variability	.067	5	.013	1.349	.249
Unexplained variability	1.210	121	.010		
Overall	1.277	126			

Source: Authors' calculation

Based on analysis of variance of F-values and the p-value less than 0.05, we can conclude that the regression model is not representative or significant, which is confirmed by the low value of the coefficient of determination. Therefore, we cannot conclude that the dependent variable return on assets depends on a set of independent variables that represent the factors of the business environment.

#### 4.3 Analysis of the connection between the business environment and the realized return on the capital of the dairy industry of B&H – The third auxiliary hypothesis

For the purpose of analyzing the third research hypothesis, a correlation analysis and regression analysis were also conducted.

**Table 5 Results of the correlation analysis for the dependent variable return on capital**

		% TAXES	Number of procedures for establishing a company	Import time (Days)	Export time (Days)	Number of procedures for obtaining building permits
RETURN ON CAPITAL H3	Pearson Correlation	.081	-.116	.035	-.039	.093
	Sig. (2-tailed)	.366	.196	.700	.666	.302
	N	125	125	125	125	125

Source: Authors' calculation

In the first step, regarding the third auxiliary hypothesis, we checked the relationship between the business environment and the realized return on capital. In order to test the first auxiliary hypothesis, a correlation analysis for all enterprises was used (Table 5). The correlation analysis crossed the values of the realized return from the capital of enterprises operating within the B&H dairy industry with the tax rate, the number of days of imports, the number of days of export, the number of procedures for obtaining the building permit and the number of days for the establishment of the company.

The value of the correlation coefficient between capital returns and the indicators of independent variables of tax rates, the time of imports and the

number of procedures for obtaining building permits show a small, almost negligible positive correlation. A small negligible negative correlation shows the correlation coefficient between capital returns and a set of independent variables, the number of procedures for establishing a company and the time of export.

The next step in testing the third auxiliary hypothesis is to construct a regression model where we define the dependent variable return on sales, while the set of independent variables consists of the tax rate, export time and number of procedures for obtaining building permits, number of procedures for establishing a company and time of import.

**Table 6 Results of the regression analysis for the third auxiliary hypothesis**

Correlation coefficient	Determination coefficient	Corrected coefficient of determination	Standard error estimation
.194	.038	-.003	.704

ANOVA	Sum of the square	Df-number of degrees of freedom	The middle of the square	F	P-value
Explained variability	2.314	5	.463	.933	.462
Unexplained variability	59.026	119	.496		
Overall	61.340	124			

Source: Authors' calculation

Based on analysis of variance of F-values and the p-value less than 0.05, we can conclude that the regression model is not representative or significant, which is confirmed by the low value of the coefficient of determination. With a value of 3.8% (expressed coefficient of determination), the rela-

tionship between the observed categories can be explained. Therefore, we cannot conclude that the dependent variable return on capital depends on a set of independent variables that represent the factors of the business environment.

#### 4.4 Conclusions in the context of auxiliary hypotheses and the main hypothesis

The last sub-heading in this chapter will be used to make conclusions regarding the tested auxiliary hypotheses, and on the basis of the results, we will show whether we have accepted or rejected the central research hypothesis and auxiliary hypotheses.

Based on the results of the correlation and regression analysis, through the interpretation of ANOVA and p-values (low, negligible correlation coefficient and low level of coefficient as well as low level of determination coefficient), we can conclude that all parameters indicate that there is no positive correlation between dependent variables: return on sales, return on assets and return on capital and a set of independent variables: tax rate, number of days of imports, number of days of export, number of procedures for obtaining a building permit and number of days for the establishment of the company.

The conclusion in the context of auxiliary variables does not support the main research hypothesis that a favorable business environment is positively related to strengthening the microeconomic competitiveness of companies in the dairy industry in B&H. All parameters indicate that the business environment in B&H does not contribute to strengthening the microeconomic competitiveness, which means that there is an unfavorable business environment. According to Talović (2014), Džafić and Bejić (2012), Džafić (2015), the development of the business environment should be directed towards strengthening the existing and the establishment of a new infrastructure that will be able to provide adequate support to B&H companies in order to strengthen their competitiveness both in the domestic and international markets, especially in the EU market.

#### 5. Suggestions for Future Research

Since small and medium enterprises are concerned, it is important to emphasize that they work with satisfactory internal resources, which should be maximized. On the other hand, limited capacities and unstimulated state support determine the current level of their performance, which is manifested through microeconomic competitiveness. This paper opens the possibility for further research on the impact of the business environment on the microeconomic competitiveness of the dairy industry in

the region, the comparison of the business environment impact on the microeconomic competitiveness among the transition countries (Serbia, Croatia, Montenegro, Macedonia and Albania). In the applicative sense, the paper sends messages to policymakers that it is necessary to create and work on improving the business environment of our country.

Measures that could be applied in order to improve the microeconomic competitiveness within the dairy industry could be summarized as follows: the creation of research and development centers in enterprises, continuous improvement and education of employees, and greater investment in equipment. On the other hand, it is necessary for the government to become proactive, contribute to the communication with enterprises and tackle the obstacles that they face in the regional or global market. The development policy must be export-oriented, and there should be adequate assistance in creating clusters, which in modern times are the driving force of development. Together they should embrace the opportunities and take advantage of them before others do.

#### 6. Conclusion

The basic macroeconomic goal of each country is to achieve development and competitive advantages, in both the micro- and macroeconomic aspects. In Bosnia and Herzegovina, the environment in which businesses operate is burdened with a number of obstacles, mostly administrative ones. Given that the enterprises in the dairy industry are small and medium-sized, a number of measures and policies need to be implemented in order to improve the business environment in which they operate. The influence of the business environment on the microeconomic competitiveness of the dairy industry was observed through three auxiliary hypotheses.

The results of the empirical research, based on the correlation-regression analysis and conducted for each of the three auxiliary hypotheses, were negative and the hypotheses rejected. When it comes to microeconomic competitiveness, the results of the survey indicate that the dairy industry companies are facing obstacles in the form of poor state support and a weak business environment. Dairy companies classified as small and medium-sized frequently have significant financial issues. A comprehensive analysis of the above data leads to the conclusion that the current business en-

vironment does not favor the enterprises of the dairy industry.

The survey was carried out on a sample of 26 companies in the dairy industry. The survey found that imports are at a much higher level than the value of exports. A more detailed analysis of the research topic resulted in a deeper understanding of the business environment and its adverse impact on the operations of SMEs, and the consequences for the microeconomic competitiveness. The imperative for every country and economic policy maker is to create a favorable and attractive business environment that will stimulate and strengthen the performance of its companies.

Obstacles to strengthening the microeconomic competitiveness in the case of Bosnia and Herzegovina are mostly those originating from other countries. If interferences are the result of the behavior of economic operators, they can be eliminated by state interventionism. When considering specific problems of the country's non-competitiveness, one is actually studying the foreign trade volume. A persistent problem of our country is the permanent deficit of the trade account (the country imports goods with high added value and exports goods with low added value). The basic task for the economic policymakers of Bosnia and Herzegovina is to focus all their efforts on creating a favorable business environment that fosters the competitiveness of companies, and thus of the entire economy.

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- 4 The CIP index represents the geometric average of 8 indicators of the manufacturing industry and exports: Indicator 1: MVapc: Manufacturing Value Added per capita, Indicator 2: MXpc: Manufactured Exports per capita, Indicator 3: MHVAsh: Medium and

High-tech Manufacturing Value Added share in total Manufacturing Value Added, Indicator 4: MVAsh: Manufacturing Value Added share in total GDP, Indicator 5: MHXsh: Medium and High-tech Manufactured Exports share in total Manufactured Exports, Indicator 7: ImWMVA: Impact of a country on World Manufacturing Value Added, and Indicator 8: ImWMT: Impact of a country on World Manufactures Trade.

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- 6 The correlation coefficient expresses the measure of two variables in units independent of the specific units of the measure in which the values of the variables are presented. It can be calculated using Pearson's and Spearman's model. In the master's thesis, Pearson's model was used. When interpreting the coefficient of correlation, the same rules apply both to Pearson's and Spearman's correlation coefficient, and are usually considered as  $r$  values from 0 to 0.25 indicating that there is no correlation,  $r$  from 0, 25 to 0.5 indicate a weak connection,  $r$  of 0, 5 to 0.75 moderate to good connection, and values from 0.75 to 1 suggest that it is very good to have an excellent connection between variables.
- 7 The coefficient of determination is an indicator of the representativity of linear regression. The values of this coefficient range from 0 to 1. The higher the  $r^2$ , the better can the dependent variable be predicted based on the independent variable.

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## UTJECAJ POSLOVNOG OKRUŽENJA NA MIKROEKONOMSKU KONKURENTNOST MLJEKARSKE INDUSTRIJE U BOSNI I HERCEGOVINI

### SAŽETAK

U ovom radu autori istražuju utjecaj poslovnog okruženja na mikroekonomsku konkurentnost preduzeća u sektoru mljekarske industrije u Bosni i Hercegovini. Poslovno okruženje u kojemu djeluju ova poduzeća može na njih djelovati motivirajuće ili pak, s druge strane, može biti ograničavajući čimbenik njihovoga napretka. Osnovni cilj u radu je utvrditi kako poslovno okruženje u okviru mljekarskoga sektora utječe na poslovanje poduzeća i na njihove poslovne performanse i konkurentnost. U istraživanju su promatrane varijable poslovnoga okruženja i varijable mikroekonomske konkurentnosti te njihova međusobna povezanost. Rezultati empirijskoga istraživanja potvrđuju ranije spoznaje i rezultate sličnih istraživanja o nepovoljnom poslovnom okruženju u Bosni i Hercegovini. Kompletna statistička obrada podataka odrađena je u razdoblju veljača - ožujak 2017. godine, na uzorku od 26 poduzeća (84% ukupne populacije), koja posluju u navedenom sektoru, metodom korelacijske analize i višestruke linearne regresije, uz pomoć statističkog softvera IBM SPSS 21. U tom smislu, primjenom višestruke regresijske analize, provjeravan je utjecaj kretanja, stope poreza, broj procedura za osnivanje poduzeća, vrijeme izvoza, vrijeme uvoza, broj procedura za dobivanje građevinskih dozvola, kao indikatora nezavisne varijable, na kretanje mikroekonomske konkurentnosti, kao zavisne varijable. Za ove svrhe postavljena je jedna centralna i tri radne hipoteze, kao i 3 modela linearne regresije, koja će pomoći pri odluci u dokazivanju ili odbacivanju postavljenih hipoteza.

**Ključne riječi:** poslovno okruženje, mikroekonomska konkurentnost, mljekarski sektor, Bosna i Hercegovina