INNOVATION AND ITS IMPACT ON COMPETITIVE POSITION OF BH PRODUCERS ON THE MARKET

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Abstract: Contemporary market requirements impose a high standard to all providers of product and service all over the world. Producers and suppliers from Bosnia and Herzegovina are daily losing the race with faster and stronger suppliers at the global market. Fast reaction to signs received from the market is a demanding job. No doubt, it is also a financially demanding job and requires highly trained professionals. This paper shows that percentage of innovations, in BiH economy, is far below necessary level. Very low percentage of companies has had at least one type of innovation: organizational, marketing or product innovation, in last four years. At the same time, worldwide producers are gaining advantages by imposing innovations and by improving their products and services and consequently, taking bigger share of the market.

It is the last moment for local companies, to perform their first steps to increase level of awareness on innovation needs and necessity to improve the capability of the management to speed up activities on regaining the lost market share at the highly demanding and well supplied world market.

Key words: Innovation, competition, contemporary global market

INTRODUCTION

Scientists and scholars around the world have written extensively on the topic: why some countries have a more successful and faster development than others? Of course geopolitical location and natural resources greatly facilitate or hinder the development of some economies, but the problem is much more complex and the answer requires consideration of other factors that affect the speed of development and the quality of economic indicators in each country. The fact that Italy is known for its exceptionally good design of

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clothes and furniture, Switzerland by its precise clocks and Germany for mechanical industry, leads to the question: how and why other nations in the world have not developed their own "brand" and why do their economies not have the same kind of momentum like other countries which are in a less favorable position, both in terms of geopolitical location and natural resources.

Scientist Michael E. Porter wrote extensively about these advantages that some countries possess over others. Porter studied the factors and reasons that lead to greater competitive advantage of one nation compared to other nations. In his book from 1990, "The Competitive advantage of nations", the scientist developed and discovered the famous Porter's diamond which classifies into four categories the most common reasons for wealth and advantage of a nation over another. These are as follows: (a) the conditions of production factors; (b) demand conditions; (c) related or supporting industries; and (d) the strategy of the company.

This approach answers why the producers from our country do not have the opportunity to compete with the world's advanced companies. The size of the companies or manufacturers is not necessarily the key reason for their reduced competitiveness. We have witnessed that many small businesses successfully and profitably operate and do not lose their market shares. Meanwhile many large and important corporations have failed to maintain their market positions and others went bankrupt. What is the reason for the failure or slow progress of businesses in the region? Whether or not and to what extent are factors of production the limiting factors? What is demand? What are the terms of suppliers and supporting industries? Do we have a well-designed company strategy?

On each of these questions we will get an answer that does not get a passing grade: factors of production are far off and below the average of almost all European countries and demand is weak and limited mainly to local markets. Very few companies are able to sell their products in the international market, which means other products do not have adequate innovation and attractiveness. Suppliers from local market in relation to the advanced developed countries' suppliers are weak and unproductive which raises the price of the finished product and decreases the quality of the finished product. Terms of purchase with foreign suppliers for our producers are unfavorable and increase the cost of the product. Most often they cannot use expensive raw materials in their products, which are due to various economic conditions inaccessible to the manufacturer. The strategy of the company is often dependent on inadequate knowledge of the owner or director of the company; who fails to respond to a large number of dynamic and necessary technological and marketing innovations that occur daily in the world. In this way, our companies are moving more slowly on the road to competitiveness on foreign markets. Those markets have rapidly changing requirements and increasing demand for the high level of quality and design of products offered by the strong and advanced producers in the world.

The hypothesis, from which we started the research, was: manufacturers in this part of Europe can become competitive with their
products in domestic and foreign market only with the introduction of innovations and changes to all levels of business approach. The introduction of innovations, technological, organizational or marketing is a financially and time-demanding job. These activities should begin as soon as possible, because the analysis we obtained in this study, shows that the level of innovation in the Republic of Srpska is significantly lower than the level of innovation in the world and producers from our region are evidently increasingly lag and get behind their competitors in more advanced countries.

Based on the research made by the Institute of Statistics of the Republic of Srpska, about how innovative companies were in the period of 2010-2012, on the observed sample of 2105 companies, and what kind of effect these innovations have on the profitability and growth of the studied companies, a second research was done on a much smaller sample in 2014. The latter research has indicated that innovation positively affected the business enterprises of the sample companies. The aim of the 2014 research was to show that the measurement of selected financial indicators, primarily the rise in sales, (before and after implementing innovations in observed companies), can be interpreted as the positive impact of innovation to the business of manufacturing firms in BiH environment.

1. INNOVATION AND SOURCES OF INNOVATIVE OPPORTUNITIES FOR MANUFACTURERS

Corporate entrepreneurship is the process by which companies seek new ways of using, maintaining or retaining innovation and making profits. In terms of major changes in the market and technological progress, quickly adjusting of the company through corporate entrepreneurship and innovation in practice is becoming one of the imperatives and the key factor not only for the success, but also for the survival of a company. "Entrepreneurs, as a rule, bring innovation. Innovation is, therefore, a specific instrument of entrepreneurship. It represents an action that endows resources with new capacities of wealth creation. Innovations do not necessarily have to be technical; it doesn’t need to be a "thing". Some purely technical innovations may compete, in terms of influence, to social innovations like newspapers or insurance. Installmentbuying led to the transformation of entire national economies. No matter where introduced, it brings changes in the economy, i.e. a shift from economy driven by offer, toward demand-driven economy, again regardless of level of productivity and strength of the economy. "

Successful entrepreneurs, regardless of their personal motives-money, power, curiosity or desire for fame and recognition - are trying to create value and new and distinct pleasure and to turn "material" into "resource", or to make a combination of existing resources and achieve new productive configurations and forms of these resources. It is this change that allows them to achieve something new and different. Systematic innovation consists of purposeful and organized search for changes, so that in the framework of a

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systematic analysis, the possibility of such changes can be accepted as economic or social changes. By definition of Peter Drucker, a scientific discipline of innovation is in fact, a diagnostic discipline: systematic research of changes in the field, which most often offer entrepreneurial opportunities.\(^5\)

Systematic innovations in their own specific way, means management of 'seven sources' of innovative possibilities. The first of these four sources are located within the enterprise, business or institution of public services, in the manufacturing or service sector. They are as such noticeable by all people in the same sector of production or services. They are basically just symptoms, signs. But they are also very sure indicators of changes that have already occurred, or can be done with a little effort. These four sources are as follows\(^6\):

- Unexpectedly-unexpected success, the unexpected failure, unexpected event from the outside;
- Discrepancy-between reality as it is currently, and the reality that it could be or what" should be";
- Innovation based on the need of a process (i.e. production);
- The changed structure of the economy and markets

The second set of sources of innovative features, a set of three such sources, includes changes outside the company, or out of the economy:

- Demographic changes;
- Changes in perceptions, moods and meanings;
- New knowledge, both, scientific and unscientific.

Seven mentioned sources require separate analysis, because each of them has its own special characteristics. None of the areas are significantly greater or more productive than others. It seems that most innovations result from the analysis of symptom changes (such as unexpected success achieved from what was considered only an insignificant change in the product and its price), as should result from the mass application of new knowledge, which in turn was the result of large scientific breakthrough.

However, the order in which these sources are considered is not arbitrary. They are sorted in order of descending reliability and predictability. This is because, contrary to almost universal belief, new knowledge and especially new scientific knowledge is not the most reliable or most predictable source of successful innovation. In contrast, an ordinary, mundane and trivial analysis of such symptoms of important changes, such as an unexpected success or failure, carries very little risk and uncertainty. Innovations, which are derived, are precisely those which take a minimum of time, from the beginning of work, to real results, any success, or any failures.

A successful innovation process requires carrying out necessary activities, such as defining the problem, fostering ideas, information transfer, integration of information and encouragement, as well as work on marketing innovation projects. Accordingly, a successful innovation process requires a combination of entrepreneurial, managerial and technological roles (functions).

\(^5\) Idem str. 57
\(^6\) Idem
Initiating the need for the introduction of innovations is one of the key factors for the start. Innovation is characteristic of companies involved in the adoption of new ideas and quick reaction to impulses from the environment. Peter Drucker believes that innovation is "organized and systematic work", accompanied by serious analysis, market research, demographic trends, etc. When it comes to innovation, the main difference between traditional and innovative organization's attitude is towards change. The most successful entrepreneurs are doing it so that its innovative development program created customers new needs.

Kotter stresses that companies, which have become particularly skillful in constant change, have three common characteristics, i.e.:

- Carefully follow the processes in own organization and in competition
- Allow the processes to be flexible in their specific contexts
- Measure all efforts in terms of results.

These organizations have the ability to greatly enhance their likelihood of success in the present and future. It also helped them to survive: the organization, which could not or cannot evolve in a constant context of rapid changes, will not last.

2. METHODOLOGY OF RESEARCH AND ANALYSIS OF SAMPLES

The research of innovative entrepreneurial activities of companies in the Republic of Srpska, was carried out according to the methodology of the OECD and Eurostat. The research was conducted through two parallel research processes. First (basic) research was conducted from 2010 to 2012. Basic research on innovative activities of enterprises in the Republic of Srpska was conducted by the Institute of Statistics of the Republic of Srpska and includes a sample of 2,105 companies. Out of these, 1,664 are small enterprises, 380 medium-sized enterprises and 61 are large enterprises. Another study of innovative activities of enterprises, covers the period from 2010 to 2014, and was conducted by the authors of this paper in 2014. Managers of enterprises in 2014 retrospectively answered about the state of innovative activities in their companies in the period 2010-2014., by filling in the questionnaire. The study represents a small view on the relationship of innovative entrepreneurial activities oriented companies that in a given period of time implemented a strategy of restructuring, in the function of companies’ growth in the Republic of Srpska. It is necessary, at the beginning of the discussion, note that the areas of the Republic of Srpska, Bosnia and Herzegovina and Serbia are having modest empirical research in this area of measuring innovation activities entrepreneurial-oriented companies, and also there is not a large number of works that deals with this issue. The intention of the research was to point out the level of innovative activity oriented entrepreneurial companies that have implemented some of the strategies of corporate governance in the function of growth based on the selected sample, as well as that based on research.

7 Idem
attempts to answer the question: „Is there, and to what degree the correlation between the degree of innovative entrepreneurial activities oriented companies that have implemented a strategy of restructuring in the function of growth and the growth of the company“. The idea of the research was also to point out that this type of research can and should be implemented in our country. We should point out that difficulties were noted during collection of data, due to the lack of aspirations of our business people to participate in research, like this one. The study included a sample of 40 companies, of which the questionnaire was answered by 42.5% i.e., 17 companies. From a sample of companies that responded to the questionnaire, 14 of them were identified as innovative, by at least one criterion of the methodology; three companies did not declare themselves as innovative under any criteria or are not maintained continuity in answering during the research period. The criteria of innovation research included the additional sub-criteria, and we divided the participants into those who worked on innovation of: product, process, organization and marketing. We examined how and where the products were innovated and we noticed these distinctions: the product developed in the enterprise, product developed in cooperation with other enterprises or institutions, a product developed by changing or adjusting the product/service that is developed by another company or institution comprising, and a product developed by another company or institution. When innovations were in process, we distinguished: a process developed in the company, a process developed in cooperation with other enterprises or institutions, a process developed by changing or adjusting process which is developed by another enterprise or institution comprising, and a process developed by another company or institution. Innovations in the organization could be divided at: new business practices for organizing procedures, new ways of organizing work responsibilities and decision-making, and new or significant changes in the relations of businesses with other companies or institutions.

Innovations in marketing: Significant changes of design or packaging of products or services, new media and techniques for product promotion, new ways of placing products on the market or new sales channels and new ways of pricing of products or services. The structure of the sample companies according to industry has been chosen on the basis of ranking the activities with the most innovative companies of basic research. So we have other research included, peer group consisting of four companies of the processing industry, four companies from the wholesale and retail trade, three companies from the construction activity, two companies from the business professional, (scientific and technical activities) and one company from the activity of transport and storage. According to the criterion method of organization, peer group of companies consisted of five joint-stock companies and nine limited liability companies.

The idea of research is to determine the degree and direction of the interconnectedness of the observed phenomenon, which will be the subject of correlation analysis. The survey was conducted in all companies in the same way - anonymous questionnaire and fully equal time interval. The research
was conducted by delivering a mix of direct survey respondents and with the help of online survey that was distributed by e-mail. A number of respondents represent stakeholders from a companies whose managers have agreed to participate in the study. Data on growth rates of total revenues, were collected from three sources: based on the financial statements of companies available on the website of Banja Luka Stock Exchange, based on the completed part of the survey on the movement of balance sheet assets (companies that have filled part of the survey) and the database of the Agency for Intermediary, IT and financial services of the Republic of Srpska.

3. RESULTS AND DISCUSSION

The target companies of this study consists of companies in the Republic of Srpska territories, according to AN - ACE Rev. 2 classification of activities who have 10 or more employees, in accordance with the methodological instructions and regulations of the European Union on the implementation of Decision No 1608/2003 of the European Parliament and of the Council on the production and development of statistics in the field of innovative activity, number 995/2012. According to basic research, the following information is provided. Table 3 shows the companies by type of innovative activity and size of enterprises in the Republic of Srpska in the period 2010-2012.

Table 1. Companies by type of innovation activity and size of enterprises in the Republic of Srpska 2010-2012

<table>
<thead>
<tr>
<th>Size of Enterprise</th>
<th>Innovative active enterprises</th>
<th>Non-innovative enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Only technologically innovative enterprises</td>
</tr>
<tr>
<td></td>
<td>Num ber</td>
<td>Num ber</td>
</tr>
<tr>
<td>Total</td>
<td>2.105</td>
<td>586</td>
</tr>
<tr>
<td>Small</td>
<td>1.664</td>
<td>405</td>
</tr>
<tr>
<td>Medium</td>
<td>380</td>
<td>146</td>
</tr>
<tr>
<td>Large</td>
<td>61</td>
<td>35</td>
</tr>
</tbody>
</table>

Source: Republic Statistical Office of the Republic of Srpska
Based on the data above, which are based on a sample, we can see that the number of innovative enterprises in the Republic of Srpska is low (27.8%). From a total of 586 innovative enterprises, of the research sample, 69.63% are small enterprises, 24.75% are medium-sized enterprises and 5.98% are large enterprises. Based on these data we can conclude that small enterprises are more innovative compared to medium and large enterprises. Also in the total number of companies, most companies dominates from both technological and non-technological innovative enterprises. The following table presents the results of technological innovation active enterprises by type of innovation and size of enterprises in the period 2010-2012.

Table 2. Technological innovation active enterprises in the Republic of Srpska according to the type of innovation and size of enterprise in the period 2010-2012

<table>
<thead>
<tr>
<th>Company size</th>
<th>Total</th>
<th>Innovations in the product</th>
<th>Process innovation</th>
<th>Process and product innovation</th>
<th>Unfinished and / or abandoned innovation activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>TOTAL</td>
<td>346</td>
<td>59.0</td>
<td>59</td>
<td>17.1</td>
<td>106</td>
</tr>
<tr>
<td>Small</td>
<td>215</td>
<td>53.1</td>
<td>42</td>
<td>19.5</td>
<td>62</td>
</tr>
<tr>
<td>Medium</td>
<td>102</td>
<td>69.9</td>
<td>11</td>
<td>10.8</td>
<td>34</td>
</tr>
<tr>
<td>Large</td>
<td>29</td>
<td>82.9</td>
<td>6</td>
<td>20.7</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Republic Statistical Office of the Republic of Srpska

Based on the data in the above table, we can see that the total of 59.0% of companies indicated as technologically innovative, compared to the total number of innovative enterprises. Also, we can see that small companies with 62.14% are the most dominant in the total number of technologically innovative companies. Also, the highest percentages, 39.1% of small business companies were innovative in the field of innovation of products and processes, i.e. 84 companies. In the continuation, in Table 3, are shown non-technologically innovation active enterprises by type of innovation and size of enterprise in the period of 2010-2012.

Table 3. Companies with non-technological innovation in the Republic of Srpska, according to the type of innovation and size of enterprise in the period of 2010-2012

<table>
<thead>
<tr>
<th>Company size</th>
<th>Total</th>
<th>Innovations in the organization</th>
<th>Innovations in the marketing</th>
<th>Innovations in the organization and marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>346</td>
<td>59.0</td>
<td>59</td>
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<td>102</td>
<td>69.9</td>
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</tr>
<tr>
<td>Large</td>
<td>29</td>
<td>82.9</td>
<td>6</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td>Num ber</td>
<td>%</td>
<td>Num ber</td>
<td>%</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
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<td>---------</td>
<td>----</td>
</tr>
<tr>
<td>TOTAL</td>
<td>488</td>
<td>83,3</td>
<td>156</td>
<td>32,0</td>
</tr>
<tr>
<td>Small</td>
<td>334</td>
<td>82,5</td>
<td>95</td>
<td>28,4</td>
</tr>
<tr>
<td>Medium</td>
<td>122</td>
<td>83,6</td>
<td>47</td>
<td>38,5</td>
</tr>
<tr>
<td>Large</td>
<td>32</td>
<td>91,4</td>
<td>14</td>
<td>43,8</td>
</tr>
</tbody>
</table>

Source: Republic Statistical Office of the Republic of Srpska

Based on the data in the above table, we can see that the 83.3% of the company designated as non-technological innovation in relation to the total number of innovative enterprises. It is interesting to notice that the large companies invested in innovation of the organization in a higher percentage (43.8%), while small enterprises accounted for only 28.4%. Investments in marketing innovation are in higher percentage represented by small (32.6%) than for large enterprises (18.8%). This inverse proportion can be interpreted in several ways but the author's freedom will consider one of the possible scenarios in small and large enterprises: in large enterprises organizational innovation in staffing levels is an important and usually with large number of activities. Small businesses should spend more energy to conquer the market, or do not need a lot of attention to pay to the less demanding organizational innovation in a simpler and often narrow business model. Also, based on the research, we can see that small companies with 68.44% are the most dominant in the total number of non-technological innovative enterprises. Also, the highest percentage of small business innovation is in the field of innovation in organization and marketing, i.e. 130 companies, representing 38.9% of the total number of technologically innovative companies.

The second sample included 40 companies, and the questionnaire was answered by 17 companies, i.e. 42.5% of them. From the sample of companies that responded to the questionnaire, 14 of them were identified as innovative, by at least one criterion of the methodology, while the three companies did not declare themselves as innovative under any criteria or did not maintain continuity in answering during the research period.

A successful innovation process requires a combination of entrepreneurial, managerial and technological roles (functions). The issue of measuring the financial effects of introducing an innovation, is gaining the importance; for this study we made a financial evaluation of the effects of introducing innovation in entrepreneurial oriented companies. Statistically speaking, the major part of implemented innovations, in the sense of finance is generated through sales revenue. In this regard, most of the financial effects of the introduction of innovation are reflected from the sales revenue. Evaluation of the effects of innovative activities in entrepreneurial-oriented company, will present a base for analysis of net income directions, which is represented by the following table.

The sample is relatively narrowed, from 40 surveyed, only 17 responded to the survey. Out of these 17 answers, three companies responded that they did not do any innovation, in period from 2010 to 2014. By deeper analysis of obtained information received from the managers in the observed sample, several conclusions can be made: (a) innovation is every time related to the increase in costs and this increase should be accompanied by revenue
growth (in the coming years, depending on the amount and type of innovation) or even better growth profits of the company, through increased sales and reduced cost of production or services; (b) Investment in marketing, must be synchronized with the quality and range of products, distribution channels and adequate qualified personnel within the manufacturing and related services (purchases, sales, customer service, etc.); (c) organizational changes must be comprehensively prepared and implemented, as they are often inadequate and changes often cause damages and costs without justification through the Income Tax; (d) well-implemented innovations, with careful listening and monitoring market trends and competition intention, with good organizational measures in production itself, are a prerequisite for increasing productivity and profitability growth of manufacturing and service companies.

Table 4. Innovative active enterprises and effects on the income

<table>
<thead>
<tr>
<th>The number of companies that reported innovation</th>
<th>The direction of changes in total revenue (in the first financial year after the introduction of innovations)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 14</td>
<td>14 companies (out of 17 interviewed companies) responded positively to the question of introducing some innovations</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Decline in revenues</td>
<td>The loss of market or misjudgment of the market, are the main reason for the decline in revenues from all three companies in this group</td>
</tr>
<tr>
<td>2</td>
<td>A slight increase in total revenue (up to 5% growth)</td>
<td>The two companies have had billing cycle slow and investment is very extensive; For the other two companies, is not well estimated time needed for the accomplishment of the investment, and were not provided sufficient funds for the investment;</td>
</tr>
<tr>
<td>3</td>
<td>A significant increase in total revenues (over 5% growth)</td>
<td>For most companies in this group, it is made a good estimation of the cost of introducing new products, properly prepared marketing activities and achieved significant savings in the production, which allowed the reduction of costs and growth in the volume of products sold</td>
</tr>
</tbody>
</table>

CONCLUSION

Lack of innovation, i.e. the willingness and speed of response of our producers, to new challenges of the market, leads inevitably to producers in the region being in a very unfavorable position in the global and domestic markets. Continuation of this trend inevitably leads to complete loss of a large part of the market. Any attempt to change and / or innovation, organizational, financial or marketing, must be designed, synchronized and measured through effects on work performance and profitability of each manufacturer. Only such a holistic approach to innovation, increases market shares and profitability, and guarantees survival of producers in this area of the market. It is not enough to have favorable labor, energy and raw material conditions to survive in the market. High quality products followed by proper price, with proper approach to the market and a speedy response to changes, are imperative for the survival of the company. Insufficient training and lack of affordable financing for all
forms of innovation, are the main obstacles to greater numbers of innovation in enterprises.

According to research conducted for this study, the majority of observed companies had a small and insufficient activity in regards to applying innovations and increasing market shares. With technological innovations only 40% of companies had activities related to innovation in product and process and about 60% only had product innovations. This suggests that the simplest and least financially demanding innovations to the product are most often implemented by the manufacturer. Non-technological innovations are also recorded in 40% of surveyed companies. The indicator of the percentage of innovations in marketing shows a measurable difference, i.e. for large companies almost 44% have invested in organizational innovation and only 18% have invested in marketing activities. For small businesses, investing in marketing is above 30% and organizational changes below 30%. A deeper, further analysis is needed to explain why these indicators are recorded as such. Are large companies investing less in marketing innovations because of their better position on the market or is it because they have more problems in their organization, so they have to focus on the organizational part of the enterprise?

Additional training of responsible managers in the companies, on contemporary business techniques and availability of favorable financial resources, could partially accelerate and increase the level of innovation in the enterprises and the institutions in the Republic of Srpska.

System solutions and support of the executive bodies, through free education of employees in companies and through other forms of support to stimulate innovation and innovative companies, could help to improve the competitive position of companies in the region by the year 2020.
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