The effect of innovation on entrepreneurial activities: the case of Azerbaijan

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Abstract. Business is an important factor that leads to the economic prosperity of various states and provides a strong stimulus to the revival of production and the increase in the economic activity of the population. One of the main factors of creating a perfect market environment in the transition to new economic relations is the formation and development of entrepreneurship. There is strong link between entrepreneurship and innovation since past. Innovation both helps developing and developed countries to grow fast and increase the social welfare for economies. There several indexes which show measures the relation between innovation and entrepreneurship. In this article the connection between innovation and entrepreneurship was analyzed by means of comparison of Global Innovation Index and Global Entrepreneurship Index respectively. Results which has been got from the comparison explain that there is connection between innovation and entrepreneurship. Also, it has to be mentioned that Azerbaijan case was been researched in this article and all necessary steps for improving entrepreneurial ecosystem were stated.

Keywords: entrepreneurship, innovation, economy, process innovation, Azerbaijan
1.0 Introduction

In the conditions of market relations, the production of competitive products is achieved primarily by achieving high profits by saving costs as a result of the introduction of innovation in the enterprise. Thus, any entrepreneur is interested in attracting innovation to the enterprise. The innovation form of entrepreneurship manifests itself in two directions: technological and product innovation. During technological innovation, it involves the further improvement of the existing product by applying the innovation to the enterprise. This type of entrepreneurship is based on the development of material and technical base. Product innovation involves the production of new products based on changes in consumer demand. In short, innovation entrepreneurship refers to economic entities that produce high-quality products using advanced techniques and modern technological methods. Based on the conclusion of the countries of the world, the entities that have an efficient innovation system and at the same time achieve the development of infrastructural areas that allow the implementation of progressive product production from the countries competing in the world economy win. Development of entrepreneurship based on innovation in our country is considered as the main factor of economic diversification. It is usually large firms that create innovative innovations. The reason for this is that this field requires large financial resources. However, small firms were able to attract this innovation to the enterprise faster.

The correct implementation of the innovation activity of the enterprise depends first of all on the correct determination of the economic efficiency of the innovation projects in the enterprise and the selection of implementation methods.

The main aim of this research paper is to determine the mutual and dependent relationship between entrepreneurship and innovation and analyzing the country profile of Azerbaijan in terms of innovation and entrepreneurship with the help of different international indexes.

2.0 Entrepreneurship-Innovation Relationship

Innovation, in other words, the understanding of
Innovation is quite complex, it is basically suspended from your practice. For example, the success of companies means increasing revenues, entering new markets, increasing profits and other advantages. Innovation, among the different possibilities of new innovation, are known as technology innovations, which are related to product or process innovations. Other innovations may be related to new markets, new business models, new processes and organizational methods. People confuse the thesis-thesis innovation and innovation processes with the continuous development and processes in this matter. In this way, in order to achieve an innovation, in the price structure, market share, company income and p. it can be used.

It can be claimed that innovation has several types such as: Product innovation, Process innovation, Innovation in business model, Incremental innovation and Radical innovation. Innovation can be implemented to the all phases of the new and existing product development. It is known that innovation has direct effect on the entrepreneurial activities it is the reason nowadays majority of entrepreneurial companies try to involve innovative approach to their body.

The history of entrepreneurship as a type of economic activity dates back to the Middle Ages. Merchants, sellers, craftsmen, as well as philanthropic missionaries began to engage in such entrepreneurship during these times. Due to the emergence of capitalism, the attempt to increase wealth led to an excessive increase in the amount of profit. As a result of the development of productive forces and production relations, entrepreneurial activity has become more human in nature. The development of entrepreneurship has now reached a high stage. Now the entrepreneur works together with other workers in his own factory and plant.

Entrepreneurship is the skill for running a business for making profit. Entrepreneur is someone who tries to gather land, labor, capital and resources for making profit at the end. But this process is quite different from business activities. One of the main reasons, entrepreneur always run for getting new ideas and to get risks related to the certain idea, however businessman generally works on tried or old idea[1].
Since the past there is strong connection between innovation and entrepreneurship. From Schumpeter's point of view, it is seen as the key element of capitalism that entrepreneurs disrupt the economic balance by revealing innovations and ensure the realization of creative destruction by encouraging economic change. [2]. For making capitalism survive, governments have to create suitable condition for entrepreneurs. It is believed that entrepreneurs can affect to the economic growth with different ways. Also they can inject innovation to the old products and with this way entrepreneurship may play an important role for economic development. With the help of innovation, entrepreneurs will create temporary monopoly. According to the Schumpeter, this created situation is called as “Creative destruction”. In terms of Schumpeter, creative destruction can be expressed as the destruction of companies that produce new and higher quality products, those that cannot keep up with the pace of innovations, that continue to produce old products, and that technology dominates the production processes [3].

In this process, according to Schumpeter everything mainly dependent on the creativity of the entrepreneur because he is the person who will take risks and will make much more profit. For the companies it is important that who leads to them. From this point of view, from Schumpeter's perspective, the duties of the entrepreneur can be summarized as follows in order for entrepreneurship to have effects on economic change [4]

- Creating a suitable innovation environment
- Overcoming socio-psychological barriers to the emergence of new things
- Directing production tools to new channels
- Persuading the banker to provide the necessary financing for innovation
- To encourage other producers in the field of activity to take risks
- Providing leadership
- Taking a high degree of risk

3.0 Entrepreneurship and Innovation Activities: A Comparative Analysis (Case of Azerbaijan)

3.1 Global Innovation index

Global Innovation index is an index which is published by
World Intellectual Property Organization with the cooperation of Cornell University, INSEAD and this index measures the innovation capacity of countries annually [5]. Global Innovation Index evaluates around 132 countries and more than 80 indicators.

Index measures the average scores of two sub-indices: Innovation Input Index and Innovation Output Index. While Innovation Input Index includes Institutions, Human capital and research, Infrastructure, Market sophistications and Business sophistications, Innovation Output Index includes Knowledge and technology output and Creative outputs.

All indices have been divided into quartiles. 4th quartile includes the ranks between 1st to 33rd which shows the best performers, 3rd quartile includes the ranks between 34th to 66th, 2nd quartile includes the ranks between 67th to 99th and 1st quartile includes the ranks between 100th to 132nd.

Graph 1
Performance of Azerbaijan in Global Innovation Index from 2019 to 2022
Source: https://www.wipo.int/portal/en/index.html
As it is seen from the graph above the innovation performance of Azerbaijan has not done well. If we look at the overall ranking of Azerbaijan by the years, it can be claimed that there was an increasing innovation performance from 2019 to 2021. However, in 2022 this number has reached to 93 which means that in terms of the overall innovation performance Azerbaijan is located in 93rd place among the 132 countries.

In 2018, Azerbaijan was located on 82 place with 30.2 points.

In 2019, among the 7 pillars only 1 pillar (Market sophistication) has been included into 4th pillar with the rank of 31. Majority of innovation pillars of Azerbaijan ranked among 2nd and 1st pillar. And it shows that our country must step up for improving innovation over the country.

In 2020, Azerbaijan has done better performance compared with 2019 but still the overall performance is under the world average. In this year, even though some pillars improved such as Human capital and research, Business sophistications but others lagged enough such as: Knowledge and technology outputs, Infrastructure.

In 2021, compared with the last 2 years the overall performance of Azerbaijan still improved but it was quiet slow.

Finally, in 2022 the overall rating of Azerbaijan became the highest level in given period with the rank of 93.

3.2 Global Entrepreneurship and Development Index

Global entrepreneurship index measures the entrepreneurship ecosystem by means of analyzing different pillars for more than 135 countries. In this index 14 different components are measured and it is believed that these components are quite significant for getting clear view on entrepreneurial ecosystem over the world. These components are: opportunity perception, startup skills, risk acceptance, networking, cultural support, opportunity startup, technology absorption, human capital, competition, product innovation, process innovation, high growth, internationalization, risk capital.

In GEDI for all components countries get point between 0 and 1. While 0 shows the lowest data, 1 shows the highest
data. Accordingly, countries can get 100 points which is the highest overall mark. On the contrary, countries can get 0 point which is the lowest overall mark.

After analyzing GEDI for 2018 and 2019, while US, Switzerland and Canada occupy the first 3 places, Chad occupies the latest position for each years.

By looking at the GEDI components of Azerbaijan for each year, we can claim that from 2018 to 2019 overall GEDI rank for Azerbaijan has increased from 30.5 points to 32.1 points. In 2018 Azerbaijan was located on 62nd place out of the 137 countries, nevertheless in 2019 Azerbaijan was located one 56th place out of 137 countries. It illustrates that there is a progress in entrepreneurial ecosystem of Azerbaijan.

If we look at the each component individually with the help of table 1 we can see there are improvement for majority of components. Only 4 components lagged over these years. These are: technology absorption, product innovation, and internationalization[6,7].

<table>
<thead>
<tr>
<th>Components</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity perception</td>
<td>0.19</td>
<td>0.44</td>
</tr>
<tr>
<td>Startup skills</td>
<td>0.19</td>
<td>0.23</td>
</tr>
<tr>
<td>Risk acceptance</td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>Networking</td>
<td>0.19</td>
<td>0.20</td>
</tr>
<tr>
<td>Cultural support</td>
<td>0.20</td>
<td>0.23</td>
</tr>
<tr>
<td>Opportunity startup</td>
<td>0.23</td>
<td>0.24</td>
</tr>
<tr>
<td>Technology absorption</td>
<td>0.41</td>
<td>0.28</td>
</tr>
<tr>
<td>Human capital</td>
<td>0.56</td>
<td>0.55</td>
</tr>
<tr>
<td>Competition</td>
<td>0.25</td>
<td>0.37</td>
</tr>
<tr>
<td>Product innovation</td>
<td>0.84</td>
<td>0.66</td>
</tr>
<tr>
<td>Process innovation</td>
<td>0.16</td>
<td>0.17</td>
</tr>
<tr>
<td>High growth</td>
<td>0.72</td>
<td>0.93</td>
</tr>
<tr>
<td>Internationalization</td>
<td>0.44</td>
<td>0.41</td>
</tr>
<tr>
<td>Risk capital</td>
<td>0.19</td>
<td>0.19</td>
</tr>
<tr>
<td><strong>Overall rank</strong></td>
<td>30.5</td>
<td>32.1</td>
</tr>
</tbody>
</table>


4.0 Conclusion

Different indicators are used to characterize the
activity of small and medium business, especially investment activity and financial situation. In other words, the complex analysis of the indicator system of statistics of small and medium-sized enterprises allows to comprehensively characterize the situation of economic entities and the demand for funds, as well as to predict the financial strategy in the market economy.

It can be claimed that there is positive correlation between innovation and entrepreneurship. The more innovative activities involved to organization the more that organization will develop.

For the final analyzing, by looking at both indexes, in the GEDI it is seen that innovation which is involved to the product has decreased from 2018 to 2019 however overall entrepreneurial rank of Azerbaijan has not been decreased because there are more factors that affect to the entrepreneurial ecosystem. In GII the overall rank of Azerbaijan decreased from 82 to 84. This also confirms that innovation in the mentioned region has decreased for 2018 and 2019. Still entrepreneurial innovation of region increase but it is undeniable that the certain situation of innovation in the region slow down the improvement of entrepreneurial ecosystem.

In terms of having better Entrepreneurial ecosystem, government should consider the Entrepreneurial Aspirations Pillars especially, product innovation, process innovation, technology absorption. Because these components are the innovation based components and effect the ecosystem directly. Governments may adopt new policies regarding improving the current innovation ecosystem which will effect to the entrepreneurship.

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BUSINESS ECONOMICS

155-172.


