



Analysis of Market Sophistication Index of the Republic of Uzbekistan

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Abstract: The article analyzes the Market sophistication Index of the Republic of Uzbekistan, which covers the macroeconomic stability and Market foundations of the Global Innovation Index, as well as Credit, Investment, Trade, diversification, and market scale from the sub-indices. Some factors hindering the development of market sophistication in the country have been considered.

Key words: innovation, global innovation rating, innovation index, market, credit, investment, trade, diversification, innovative development, economic growth.

INTRODUCTION

In general, the study of market problems for innovative development is a large-scale issue. In particular, the purpose of Market sophistication is not only to ensure the effective functioning of scientific, technical and innovation activities in the field, but also to prevent the impending economic crisis and create conditions for the introduction of the necessary innovative changes in the market, access to credit, protection of new jobs and should also increase product competitiveness.

The study on innovation is directly linked to two areas close to science: management and economics. The first one seeks to understand the internal dimensions of innovation, (i.e., its generation within organizational structures) while the second one seeks to understand the effects of its evolution within companies.[1]

The subject of this study is an assessment of the impact of market development on global competitiveness in Uzbekistan. In particular, the goal of a well-developed market is not only to ensure the effective functioning of scientific, technical and innovation activities in the field, but also to prevent the economic crisis and create conditions for the implementation of innovative changes in production, create new jobs and product competitiveness. Therefore, in our study we consider only the Market Development Index of the Republic of Uzbekistan on the global innovation index .

Related Literature and Methodology

The concept was first coined by business academic Eugene Schwartz in his book, "Breakthrough Advertising," which introduced the concept of the five levels of market sophistication. Schwartz wrote that time and again, organizations were missing out on valuable opportunities to sell their products to customers. This was due to the fact that customers sit on different levels of market sophistication, and marketers need to take this into consideration with the

messages and advertisements they put to the market.[2] In short, understanding market sophistication means that your organization understands exactly how many similar products and/or services the marketplace you are operating in knows of already.[3]

The effectiveness of the organizational and economic mechanism of management of industrial enterprises, which is a complex multi-level system, is influenced by two groups of external and internal factors. External factors include political, resource, financial, economic, environmental, sociodemographic, and innovative. These are direct impact factors. Internal factors include – economic, organizational, production, technical and technological, personnel, social, marketing.[14]

At the same time, different international organizations and individual states are using different methods to independently assess market sophistication. Including:

- Methodology of knowledge assessment (Knowledge Assessment Methodology - (KAM))

The knowledge assessment methodology (KAM) is "an interactive benchmarking tool created by the World Bank's Knowledge for Development Program to help countries identify the challenges and opportunities they face in making the transition to the knowledge-based economy"[4];

- National Innovative Capacity (NIC). The theoretical basis of the conceptual framework of NIC mainly comes from the theory of the national innovation system (NIS). Freeman put forward the concept of NIS in 1987, and regarded NIS as the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies (OECD, 1997)[5];

- European Innovation Scoreboard (EIS)- The European innovation scoreboard provides a comparative analysis of innovation performance in EU countries, other European countries, and regional neighbours. It assesses the relative strengths and weaknesses of national innovation systems and helps countries identify areas they need to address[6];

- The Global Innovation Index (GII) is published by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. Recognizing that innovation is a key driver of economic development, the GII aims to provide an innovation ranking and rich analysis referencing around 130 economies. Over the last decade, the GII has established itself as both a leading reference on innovation and a "tool for action" for economies that incorporate the GII into their innovation agenda. The Index is a ranking of the innovation capabilities and results of world economies. It measures innovation based on criteria that include institutions, human capital and research, infrastructure, credit, investment, linkages; the creation, absorption and diffusion of knowledge; and creative outputs. [7]

The Innovation Index rating is based on 7 key indicators:

- institutions;
- human capital and research;
- infrastructure;
- market sophistication;
- business sophistication;
- knowledge and technology outputs;
- creative outputs.

In our study, we consider Global innovation Index the Market sophistication Index of the Republic of Uzbekistan for 2012-2021.

Market sophistication is the availability of credit and an environment that supports investment, access to the international market, competition, and market scale are all critical for businesses to prosper and for innovation to occur. The Market sophistication pillar has three sub-pillars structured around market conditions and the total level of transactions (Table 1).

Research Results

Uzbekistan ranks 86th among the 132 economies featured in the GII 2021. The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation. The following table shows the Market sophistication rankings of Uzbekistan over the past two years (Table 1). The statistical confidence interval for the ranking of Uzbekistan in the GII 2021 is between ranks 27 and 24.[11]

Table 1

Market sophistication index of the Republic of Uzbekistan

| Sub-indices | Score/ Value 2020 y. | Rank 2020 y. | Score/ Value 2021 y. | Rank 2021 y. |
|---|----------------------------|-----------------|----------------------------|-----------------|
| Market sophistication | 54.9 | 27 | 56,9 | 24 |
| Credit | 43.3 | 57 | 30.2 | 105 |
| Ease of getting credit | 65.0 | 61 | 65.0 | 61 |
| Domestic credit to private sector, % GDP | n/a | n/a | 30.0 | 95 |
| Microfinance gross loans, % GDP | 0.0 | 79 | 0.0 | 80 |
| Investment | 70.0 | 8 | 70.0 | 11 |
| Ease of protecting minority investors | 70.0 | 36 | 70.0 | 36 |
| Market capitalization, % GDP | n/a | n/a | n/a | n/a |
| Venture capital investors, deals/bn PPP\$ GDP | n/a | n/a | n/a | n/a |
| Trade, diversification, and market scale | 51.3 | 108 | 70.4 | 62 |
| Applied tariff rate, weighted avg., % | 8.7 | 109 | 8.7 | 110 |
| Domestic industry diversification | n/a | n/a | 95.9 | 22 |
| Domestic market scale, bn PPP\$ | 297.2 | 59 | 250.2 | 60 |

Source: Global innovation index -2020, 2021. [10,11]

Market sophistication

The global financial crisis of 2007-2009 determined how important credit was to business performance and became the focus of most government policies. These indicators help to determine the status of credit and the situation of creditors and investors in the economy. The Credit Index consists of the following sub-indices: Ease of getting credit; Domestic credit to private sector, % GDP; Microfinance gross loans, % GDP.

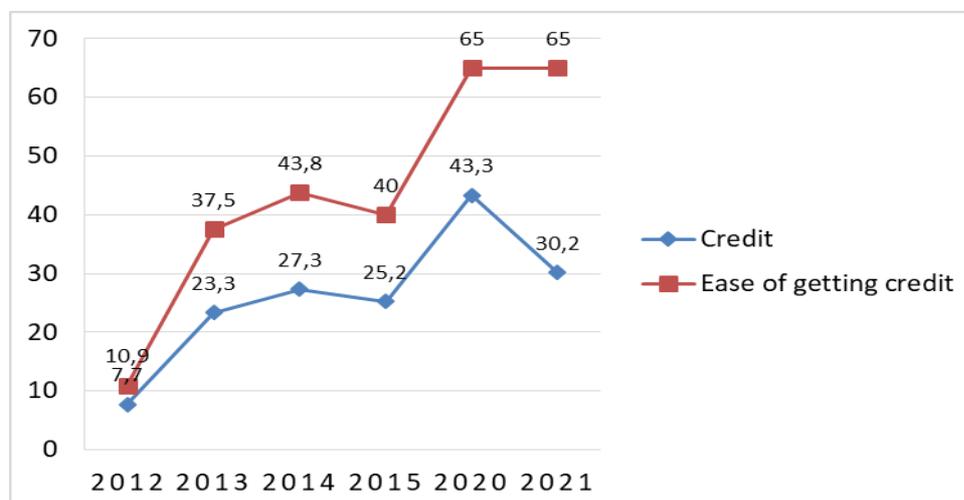


Figure 1. Dynamics of credit indicators in Uzbekistan

Source: Global innovation index -2012, 2013, 2014, 2015, 2020,2021. [6.7,8,9,10,11]

If we pay attention to the dynamics of credit indicators in Uzbekistan (Figure 1 and Table 1), we can observe the stable development of indicators. Ease of getting credit in the last 6 year increased by +25 points and ranked 61st in the GII(Table 1). Here, in the last 1 year, Credit fell by 13 points, ranking 105th in the GII rankings. Domestic credit to private sector subindicator was first reported and scored 30.0 points. The total loan portfolio of microfinance institutions fell from 79th to 80th place in the GII rating(Table 1).

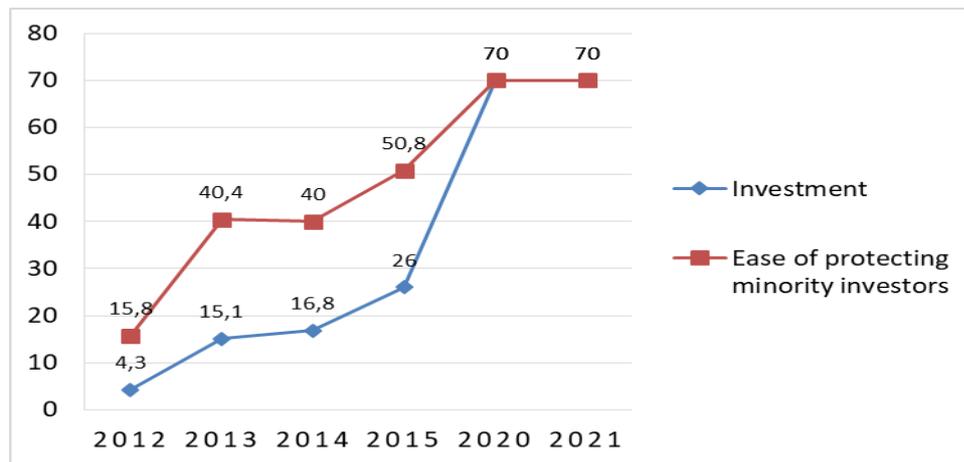


Figure 2. Dynamics of Investment Indicators in Uzbekistan

Source: Global innovation index -2012, 2013, 2014, 2015, 2020,2021. [6.7,8,9,10,11]

Investment

The Investment Index consists of the following sub-indices: Ease of protecting minority investors; Market capitalization, % GDP; Venture capital investors, deals/bn PPP\$ GDP.

If we look at the dynamics of investment indicators in Uzbekistan on GII (Figure 2 and Table 1), we can see that the indicators are developing steadily. Here, in the last 5 years, Investment has grown by +44 points and ranked in the top 11 in the GII rankings. The Ease of protecting minority investors increased by +18 points and ranked 36th in the GII. Data on Market capitalization and Venture capital investors are not provided(Table 1).

The Trade, diversification, and market scale Index consists of the following sub-indices: Applied tariff rate, weighted avg.,%; Domestic industry diversification;. Domestic market scale, bn PPP\$

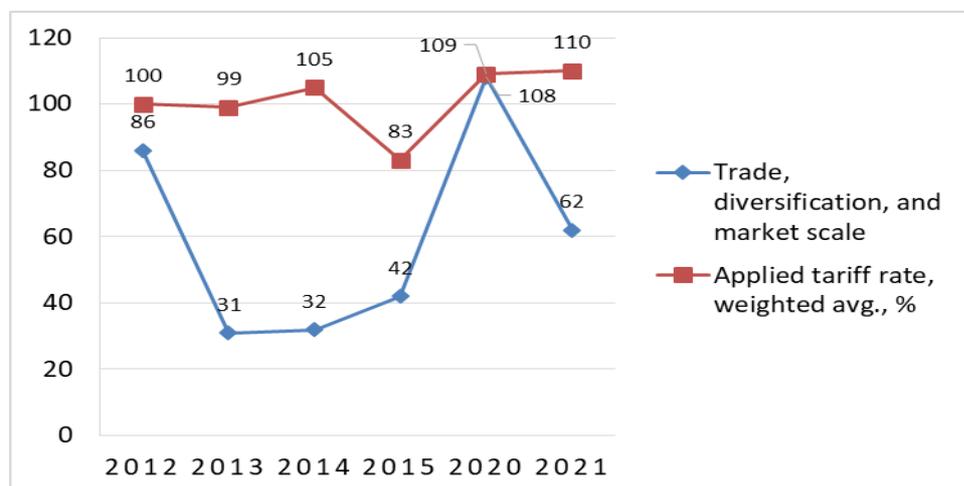


Figure 3. Dynamics of Trade, diversification, and market scale Indicators in Uzbekistan.

Source: Global innovation index -2012, 2013, 2014, 2015, 2020,2021. [6,7,8,9,10,11]

If we look at the dynamics of trade, competition and market indicators in Uzbekistan according to the GII (Figure 3 and Table 1), we can see the unsustainable development of indicators. Here, in the last 1 year, the volume of Trade, competition and the market scale fell by -46 points, rising from 108 places in the GII rankings to 62nd place. The applied tariff rate increased by +1 points and decreased from 109rd to 110th place in the GII rating. The Domestic market scale index ranks decreased from 59th to 60th place. In Domestic industry diversification, it is the first time that information has been provided, and it took 22nd place with 95.9 points (Table 1).

Conclusion

Thus, the analysis of the current situation in the field of market sophistication shows that the problem of creating innovative infrastructure is quite complex and requires special processing. Currently, Market sophistication is well developed in Uzbekistan. However, organizations and enterprises engaged in innovation activities, as well as credit and financial institutions that provide funding, are less interested in such activities.

Based on the above analysis of GII data for recent years, the following conclusions can be drawn:

- GII of Uzbekistan is calculated since 2012. The analysis of the Market Sophistication Index of Uzbekistan in this period shows a positive trend;

- The GII does not provide data on 2 out of 9 components of business development indicators. Thus, the absence of this information in the GII rating contributed to the high performance in the formation of the rating.

Market sophistication network of market sophistication forms the basis of any economy, which reduces transaction costs and, in turn, increases market access. For this:

-find and practice ways to use credit effectively;

- Systematic work is needed to collect data on Market capitalization and Venture capital investors indicators;

- It is necessary to work to reduce the applicable tariff rate.

We believe that the annual statistics compiled by the State Statistics Committee of the Republic of Uzbekistan, including the components that make up the GII, will attract the attention of experts, researchers and scientists working in this field and provide a basis for further study of the GII.

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