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Article

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Academic journal of economic studies

Provided in Cooperation with:
Dimitrie Cantemir Christian University, Bucharest

Reference: İbrahimova, Khayala/Suleymanov, Elchin et. al. (2019). Influence of Innovations on Economic Development in Azerbaijan. In: Academic journal of economic studies 5 (3), S. 58 - 63.

Academic Journal of Economic Studies
Vol. 5, No. 3, September 2019, pp. 58–63
ISSN 2393-4913, ISSN On-line 2457-5836

Influence of Innovations on Economic Development in Azerbaijan

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Abstract

The Internet is a network that occurs as a result of connecting two or more computers together. Rapidly developing Internet technologies and the Internet create a relationship between individuals (customers), business and trading partners, allowing the buyer to shop electronically without leaving his/her home. Especially in the countries of the Black Sea, America and Japan, e-commerce, which is widely used, has become widespread in Azerbaijan. E-commerce is the purchase and sale of all types of goods and services by computer technology, electronic communication channels and related technologies. In this paper, the definition of electronic commerce and its economical dimension will be examined and then the probable effects of electronic commerce on Azerbaijan Economy will be presented.

Key words

E-commerce, Azerbaijan economy, Internet, electronic communication channels

JEL Codes: L14, L15

Received: 05 July 2019 **Revised: 20 July 2019** **Accepted: 30 July 2019**

1. Introduction

Text The economic development is defined to measure National Income GDP to gauge the overall size in external trade, money and debt –to GDP ratio. There are literally several impacts on the Economic Development. We can take the sample they involve state bodies, nature, energy finance, tax, population and technology. Nowadays development is related to the technological evolution. As technology progress continues to evolve, it needs to take business principles into account. Innovation is the any true way to obtain progress within value added in innovation. Knowledge and economic approach based on knowledge is the key problem throughout the World after Industrial Renaissance. Global Processing and Competitiveness in the World Economy is viewed as crucial to allow for rising standards of economic development based on science. The countries must do a better job of transferring new ideas into technology and commercializing achievements. As follows, information society has performed rather than industry community. In particular, it implies briskly in developed countries offering greater scope to World Economy or Global Economy. Thusly, as developed countries have a wide base of economy market .They are putting a large amount of money into educational areas. Innovation development is actually as the key driver of competitiveness. It is evitable that innovation researches lead to foster educational economic. Globalizing and technological progress impacts persuade enterprises to struggle strictly economic competitiveness. The enterprises must have a competitiveness strategy which it represents a vision for how enterprise might collaborate to struggle competitiveness to hold on sustainable performance. Innovation provides effectively individual and social needs. Innovation is the major concept to ownership as well. Any new enterprise can come out after releasing new things. Furthermore, all attempts must be renewed in order to hold on competitiveness strength. The countries should evolve new ideas into technology and commercializing achievements to keep economical growth, competitiveness skills and employment opportunities.

1.1. Innovation and the role of economy

Innovation can be simply defined as a different, new idea and realization of them. Thus, these ideas settle the unsolved hardships beforehand, or enable these appropriate ideas and services. Innovation occurs as holding innovative ideas, creating and selling new products. Innovation can also impact on production income as well as making products. Meanwhile, innovation is the new ideas to be valuable in the market throughout producing. When innovation appears, it refers that science becomes beneficial for economy and society. It means that people with innovative minds create new ideas in this duration. Stages of Innovation Process: (1) Observe, Uncover New Problems—and Opportunities; (2) Create New Solutions; (3) Prototype and Learn in the Market; (4) Implement the Best Ideas.

Innovation has several good impacts on the society, enterprise and country economy. The good results for enterprises involve keeping economic capacity, efficiency growth, profit growth to utilize raw materials effectively, development growth, to change information into economic value, to customer satisfaction, to set time limit for product listing, to reduce waste. Results for community and economy: to raise the standard of living, to obtain sustainable economic development, employment opportunities, ownership opportunities, etc. There can be several major changes by means of innovation development and implementation. So these innovative results solve the problems effectively. For instance, invention of computer and implementation implied the Renaissance in the ICT. New and innovative ideas improve ownership performance. Progress in economy appears so that there are new tips to set up ownership, the rise of economy in the country. In conclusion, we are seeing the country is growing.

When an enterprise produces the unironed cloth after cleaning it, the other one produces productive plant seeds to be sustainable against diseases, it makes the eggs in the shapes to draw in children. It refers to the innovation as well that the hospital attaches the patients' check-up lists in the website. The products based on new ideas go ahead of others and attracts a number of customers so that innovation is defined as novelty. We can take the sample that NESTLE company acquires the purchased nuts within production process and value chains, so it gains a plenty of. In the World Economic Forum's research, in recent years, Finland comes top as the world's highest economic capacity country. What did Finland do in order to reach this stage?

Finland created a strong economical environment by putting an amount of money into innovation.20 years ago; Finland put a wide source into innovation. These kinds of investments appeared in the term of economy decreasing .So, in 1990 the crisis that happened in 1999 was eliminated after economy crisis, it began to hold education and research program. I to establish the strong links between universities and companies; why innovation economics was formed instead of foresting and agriculture. Education and technology areas have been seen as an important instrument of Finland economy. Innovation started to snowball into other sectors of the economy. Correspondingly, in the 1985s National Income per capita averaged 10,470 &, reaching an all-time high of 29000 & in 2004.Meanwhile, it occurs to have an innovation economic development. Innovation, technology progress depends on fully the headway in education and technology. Accordingly, in addition to fundamental researches, applied researches must have been held in the universities related to scientific knowledge. This area is called is "Technopark" that refers to realize scientific activities, to build new attempts, and to make corporation between university and industry. Techno Park is a site to provide great opportunities for innovators and inventors to gain the achievement, to make the companies, ventures to assemble, to build up the partnership between university and industry. Briefly, technopark is an effort to establish the link between industrial companies which refer to education ,human stock ,front-rank technology with university and research center.to help the companies in the net area with technological transfer or innovation management, "technopark" term appeared in 1950 in the USA, and the first techno park was made only in the USA. Technoparks are formed as "research park" in the USA," Science Park" in Great Britain, "Technopol" in France ,techno police in Japan, technology(innovation) center in Germany.

2. Innovation development in Azerbaijan

In 2009, BARAMA Innovation and Entrepreneurship Centre was established, aimed at fostering Entrepreneurship in the country. "Co working "style occurred in Azerbaijan at the first time so that Techno park was exposed in 2012 in the presence of Baku Engineering University ,in 2013 start-ups were supported and "High Technology Park" was established. In the same year, Business incubator Centre was set in whereabouts of UNEC.in 2015 "Baku Business Factory", "Next Step Innovation Center "and "Sup.az Accelerator" started to act. İn 2016"Colab Co-Working" was commissioned. Every year a number of innovative young people receive the support for their projects and they come become a Start-up. Start-up refers to the companies which are involved in new business or activities. Start-ups cover members of the team gathering to propose new ideas. "Start-up" testimony has started to become well-known since 1990.It is concerned that "nöqt.com" companies were being established newly at that time. These sustainable internet companies have included "Amazon.com" and "ebay.com" since them.

Thus, technological progress and high novelty are the key pattern for entrepreneurship because of economic capacity. Innovation process is an important influence on local and regional policy by widely involved in production service level. Novelty of innovation has its most important impact on the economic development and it makes synergy in the area. Getting value added has its big impact on economic capacity and development by opting a range of novelty. However, R&D (research-development) requires the innovations based on novelty and research related to the research results. In other words, novelty or novelty process requires needs education and research needs. This case combines individual and society, as well as public existence. Research and Development is an essential component and a key factor in innovation

management. Universities and Scientific Research companies have an important role in this context between who that the partners involve in novelty.

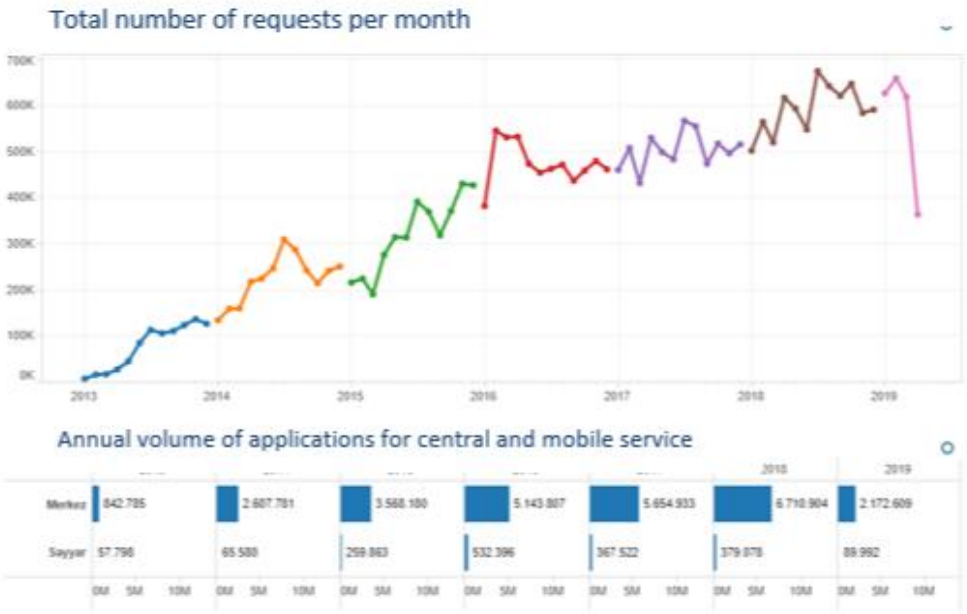

Figure 1. Intelligent Monitoring System ACCOUNTABILITY MODE

Thus, these bodies' innovative approaches and the approaches related to market needs are one of the main issues. Innovation is based on 5 factors: investments, institutions, human stock, current infrastructure and business environment. Powerful motivation and motivation development must be created based State Policy in order to enlarge innovation space .As it is mentioned that, new innovations means to upgrade current products or totally it can be new product, process, and business model based on knowledge.

Table 1. Regional and Economic Groupings for E-Government Development İndex (EDGI)

Country	Region	Sub - Region	EDGI - Level	Level of Income	GNI – Per Capita (US dollars)
Afghanistan	Asia	Southern Asia	Low	Low Income	670
Albania	Europe	Southern Europe	High	Upper Middle Income	4460
Algeria	Africa	Northern Africa	Medium	Upper Middle Income	5480
Andorra	Europe	Southern Europe	High	High Income	43270*
Angola	Africa	Middle Africa	Medium	Upper Middle Income	4850
Antigua and Barbuda	Americas	Caribbean	Medium	High Income	13360
Argentina	Americas	South America	High	High Income	14160
Armenia	Asia	Western Asia	High	Lower Middle Income	3780
Australia	Oceania	Oceania	Very High	High Income	64680
Austria	Europe	Western Europe	Very High	High Income	50390
Azerbaijan	Asia	Western Asia	High	Upper Middle Income	7590
Bahamas	Americas	Caribbean	High	High Income	20980
Bahrain	Asia	Western Asia	Very High	High Income	21050
Bangladesh	Asia	Southern Asia	Medium	Lower Middle Income	1080
Barbados	Americas	Caribbean	High	High Income	14960**
Belarus	Europe	Eastern Europe	High	Upper Middle Income	7340

Source: https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2018

Innovation definitely can be result from the demands of market .It can be the market oriented. Azerbaijan took the 85th place among 128 countries in 2016 in Global Innovation Index. The country took the 101st place among 128 countries in the subcategory of Index named "Knowledge and Technological Products "The number of Patents ,scientific articles and new innovative business took the 80th place among 138 countries in the subcategory of patent needs, as well as it is based on the market infrastructure.

Table 2. Position in the report ''E- government survey '' in post-Soviet countries

N	Country Name	Position in the report " E-government survey 2016"	Position in the report "E government survey 2014"	Position change
1	Russia	32	30	-2
1	Ukraine	32	77	+45
2	Azerbaijan	47	77	+30
2	Uzbekistan	47	71	+24
3	Moldova	50	40	-
4	Kyrgyzstan	67	81	+14
4	Kazakhstan	67	22	-45
5	Belarusian	76	55	-21
5	Georgia	76	49	-27
6	Armenia	84	59	-25
7	Tajikistan	149	158	+9
8	Turkmenistan	179	158	-21

Source: https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2018

3. Innovation in the Legislation of Azerbaijan Republic

The uttermost decisions have been admitted in the innovation context in Azerbaijan to build up economy. It is mandatory to search the world pattern and learn them in order to make the decisions and to make their sustainable development. Firstly, The Republic of Azerbaijan Law based on Education refers to hold Scientific activities in Azerbaijan, to take their maintained, to the main principles of state policy, the science and knowledge –innovation activities, to the tips to aim at putting financial affairs into science to stimulate scientific achievements. The government provides the equal opportunities for all organisations and enterprises to hold knowledge- innovation activities and stimulates their activities according to the 4th issues of Law named "The main principles of State Policy based on knowledge-innovation". Azerbaijani President has signed a decree endorsing "Strategic road maps for the national economy and main economic sectors" that innovation issues occur to drawn in.3.1.4 question in "Strategic road maps for the national economy and main economic sectors" refers to attempts of development in education –research –innovation strategy in the way which the decree was endorsed to get the targets of the viable development of non-oil sector and the uttermost progress of the country and it indicates to increase the effects of chains. Presently, Azerbaijan National Academy of Science can put efforts into Azerbaijan to participate in Global Produce Chains by the means of the highest presence in "Science –Education –Produce" chain. It is attempting to build up the Research University aimed at setting "Science –Education –Produce" chain. It can boost the place of private companies in financial affairs into Science by cultivating business area that impacts on companies' research and stimulation of investments. The Ministry of Education must hold the efforts for the development of Higher Education Enterprise based on "Science-Research-Innovation" in the partnership with Azerbaijan National Academy of Science in 2017-2018.Center for Economic Reforms analysis and Communication will hold monitoring ,diagnostic and communication activities related to the strategic road map. Law based on "Education" refers to the innovations that are different efforts, various novelties on Scientific Research.

Table 3. Expenses on technological innovations in the Azerbaijani industry by type of economic activity, thousand manat

Expenses components	2004	2005	2010	2015	2016
Total industry	417.1	53273.0	8139.0	35179.0	27929.0
Research and development of new products, processes and services	131.2	853.5	2551.0	13283.0	5655.0
Purchase of machines and devices due to technological innovations	39.4	1840.0	5053.0	12765.0	1963.0
New technologies procurement	121.8	50573.0	-	3022.0	15919.0
Software procurement	-	-	-	859.5	1217.0
Personnel training for innovation	-	-	95.6	37.2	43.2
Production design, use new methods and services for production	53.4	4.6	300.1	5202.0	2700.0
Marketing research	-	0.82	-	-	-
Technological innovation	70.8	2.02	140.0	-	-

Source: State Statistical Committee of Azerbaijan Republic in 2017

The State Strategy for Education Development is concerned to support to evolve from higher education enterprises into Education –Research –Innovation Centre. Azerbaijani President signed the phase as “"National Strategy for Information Society Development in Azerbaijan for 2014-2020".The national strategy was approved by President Ilham Aliyev on 2014 April 2.The ministry will act as a coordinating entity for implementation of the national strategy. National strategy is aimed at realizing the economic potential of the country, utilizing the existing capabilities and improving the governance methods in the age of modern technology.

Table 4. The volume of innovative products introduced for the first time by industry sectors, thousand manat

	Products that have undergone major improvements and products first introduced				
	2005	2007	2011	2015	2016
Industry - total	8531.0	826.2	13163.0	929.7	35747.0
Mining industry	-	208.5	2073.0	-	129.6
Processing industry	8531.0	617.7	11090.0	929.7	35617.0
including:					
Chemical industry	5915.0		-	13.4	522.4
Manufacture of machinery and mechanisms	95.6	355.3		158.3	174.9
Metallurgy and production of finished products	-		-	-	9613.0
Electrical equipment, optoelectronic equipment	-	262.4	13.5	738.5	-

Source: State Statistical Committee of Azerbaijan Republic 2017

The strategy takes into account all the experiences and recommendations of the International Telecommunication Union (ITU), the European Union (EU) and UNESCO. The main objective of the strategy is to build an information society and effective use of its capabilities by citizens, society and the state for the sustainable socio-economic, cultural and economic development of the country, including the development of ICT. Bringing ICT infrastructure and services to international standards, developing and strengthening the scientific and technological potential in the field of high technology, increasing the role of "e-government" and ICT as well as improving human resources and information security are among the main goals of the strategy. The great importance in the national strategy is attached to strengthening competitiveness and export of products in the field of ICT. Moreover, the development of high technologies including aerospace, nuclear and nanotechnology, biotechnology, electronics are also highlighted. In December 2012 the President of the Republic of Azerbaijan, Ilham Aliyev signed a decree that approved the “Development Concept. Azerbaijan – 2020: Outlook for the future”. The development strategy of the Development Concept is based on the forecast that by 2020 Azerbaijan will be a fully competitive and developed State. The decree fixes the principal guidelines for sustainable growth: the improvement of social welfare, the efficient management of the State, the supremacy of law, human rights and freedoms and the involvement of civil society in public life. The Development Concept makes a careful analysis of the global factors that influence social, political, and economic life in the country.

6. Conclusions

As part of the global development trend, the main challenges for Azerbaijan are: economic diversification, elimination of dependency on hydrocarbon exportation, rapid growth of the non-oil sector, and the increase of efficiency and comparative advantage in the production processes through new technologies. The development of the industrial sector will be possible through the strengthening of the scientific and technological potentials and through the expansion of educational, scholastic, and virtual opportunities for human capital. In addition, the importance of intellectual property rights is highlighted in order to stimulate creativity and innovation as a part of more effectively regulated market. Azerbaijan has faced the economic international crisis well, in primis through rational macroeconomic and monetary policy, the creation of monetary reserves, and the management of the financial risks. The government aims to create and strengthen more flexible financial mechanisms and precautionary measures to protect the national economy against future recession. The Development Concept takes into consideration the existing opportunities and national resources in order to promote a highly competitive economy. According to the classification based on GDP of the World Bank in 2020 Azerbaijan will move into the group of “Countries with a high average income” and will eliminate its dependence on hydrocarbon exportation, the reason why the country is still on the lowest level. Increasing competitiveness involves different financial sectors including the protection of the macroeconomic stability, the strengthening of monetary and fiscal policies, the development of financial services, and the increase of foreign trade and investment policies.

Azerbaijan plans to use the economic, social, and politic resources to their full potential, through the expansion of national energetic and logistical infrastructures, transportation, the creation of development regional Centres for the promotion of local services and benefits, even in the smallest cities and villages. In addition, the realization of a reliable security system through the development of information and communication technology, the full digitalization of the country, and the use of e-government services will be the priorities for State modernization. The goal is to improve welfare policies, in particular for education and public services, security, gender equality, family, youth, sport, preservation of cultural, artistic, and natural heritage.

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