THE MODEL OF SUSTAINABLE COMPETITIVE BUSINESS FOR AZERBAIJAN’S TECHNOLOGY INDUSTRY

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Abstract. Taking into account the current economic situation, the study of this article is divided into several aspects, which reveals the overall picture of what is happening with step-by-step concepts to eliminate the difficulties encountered. Initially, Azerbaijan has been suffering an economic crisis since 2014, which has led to a number of problems, such as "the decline in the quality of development of health and educational institutions, the restriction of labour force, inflation, etc.", which had a direct impact on capital restrictions, and a decrease in the level of profits. Secondly, taking into account the growing difficulties, the country takes an active part in the development of effective strategic solutions using theoretical concepts, proving competitiveness as the Foundation for the development of sustainability, where the main purpose of the article is to define the concept of sustainable competitiveness and factors affecting the sustainable development of the ICT industry in Azerbaijan. Thirdly, comparing the failures in the oil and gas industry and the technical capabilities of Azerbaijan in this industry, as well the theoretical possibilities of competitiveness, it should be concluded that the development of the ICT industry will be the best solution, which in the future will have a significant impact in the industries.

Keywords: Sustainable development, Industry, Competitiveness, Sustainable competitiveness, Industry level, Global competitiveness.

Introduction

Competitiveness is a global concept that includes a set of institutions, policies and factors that determine a country's productivity. The principle of competitiveness is to support productivity, impose import taxes, where economists Eli Heckcher and Bertil Ohlin argue that export trade has the necessary potential for development, and has a direct link with internal competitiveness. Taking into account the advantage of export trade, according to the report (CEIC global database), Azerbaijan is actively involved in the development of export sectors in the competitive ICT industry to promote economic growth among sustainable developing countries. However, along with the desire to improve the ICT industry, there is a significant difference between developing countries, which requires an immediate strategic decision. According to the report (on global competitiveness 2008-2017), the reason for the low rating of Azerbaijan is due to the economic difficulties that are the result of civil strife in the country, according to (World Economic Forum 2017). Taking into account the changing economic positions in the country, the government has launched a follow-up strategic decisions that complement each other is "measuring competitiveness by 12 components, identifying existing industries, obtaining investment, using the industry cycle in the development of ICT for comparative analysis". Nevertheless, paying attention to the various assertions of porter and Jean Bay, industrial competitiveness is an integral part to support sustainable development in international free trade, as everyone tries to sell a product/service improving the infrastructure of the industry presenting the importance of the concept of competitiveness as the foundation of sustainable development.

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The aim of the article is to clarify the concept of sustainable competitiveness and to determine the main factors in the ICT industry, where the hypothesis of the research is how to be competitive and sustainable at the same time. The article is divided into several sections, where the theoretical concept is a fundamental idea for the approval and formation of comparative analysis using available statistical data that is a normalization method for empirical research.

1. The concept of sustainable competitiveness

1.1. Definitions and aspects of global competitiveness

The concept of competitiveness originated on the basis of public ideas, with the aim of imposing import taxes, the support of the state manufacturers, etc. According to state politicians the highest degree of increasing resources is the export of international trade that is closely linked to internal competitiveness. Because, in the 20th century, economists Eli Heckcher and Bertil Ohlin argued that export trade should always be on the move, because it has all the necessary resources to promote. Besides, there are many other economists such as M. Porter, who is widely known among various economists for his hotly debated research on countries, and industry or enterprise competitiveness (Abay, 2016).

According to J. Rojak, internal competitiveness M. Porter is a tool innovations and improvements, which has a complex system for managing efficient growth, compared with other countries. In the current research, competitiveness is a comprehensive concept considered by means of the set of institutions, policies and factors that determine a country's productivity. Competitiveness is as well determined in different ways by different authors. Consequently, a complex system of competitiveness is to support the economic balance in international and local markets (Anyanitha, 2018).

The world economic forum is an international organization formed in 1971 as a charity fund for the public and private sector. The leading goal of the forum is to illustrate entrepreneurship in the global public interest, while maintaining the highest control priorities, where bringing together people of different ranks of society who have the incentive and influence to implement sustainable change achieve success. The World Economic Forum is consists of Industry affiliation, Strategic Partnership, Institutional Membership and etc. (David, 2013)

![Figure 1. The correlation between the countries](image)

According to the world economic forum competitiveness is one of the tools that is required in the development of a competitive economy, where according to experts competitiveness is the easiest solution in achieving the desired results in the economy of any country. As well, in the terms of the global competitiveness index, (e.g. Figure 1), competitiveness consists of 12 aspects, where the characteristics of each aspect represent the level of productivity of the country. Features of productivity is to establish key aspects in determining growth and income levels, where the human factor is a key component responsible for the sustainable promotion of competitiveness that affects the wellbeing of the economy (Elena, 2017).
In other words, sustainable competitiveness is a theory focused on the assessment of the economic potential of a country, able to meet the needs of society, taking into account the fact that increasing the level of competitiveness often depends on the creativity of innovative ideas that are a key factor in the implementation of sustainable development. For instance, Azerbaijan is the key points of the research, because the country has all the qualities such as "territorial advantage, climatic conditions, mentality, etc." which is vital for the development of a sustainable economy. Nevertheless, along with the above advantages, there are a number of disadvantages "Tax regulations, Inflation, Government instability/coups and etc. (e.g. Figure 2)" influencing the improvement of enterprises in Azerbaijan, and require immediate solutions of the research (Frank, 2013).

Figure 2. Factors influencing the improvement of business in Azerbaijan (Source: by the "World Economic Forum, Executive Opinion Survey 2017")

1.2. Definition and main aspect of state’s sustainable competitiveness

The primary aspects of sustainable competitiveness are the ability to maintain and improve limited resources of importance among 176 countries in the global market. This concept was founded in 2012, which is identical to the model of competitiveness, where the primary goal of sustainable competitiveness is to prevent the excess of natural and social capital, and to increase the needs of existing consumers. The model of sustainable competitiveness is based on four pillars: "natural capital, resource efficiency, sustainable innovation, social cohesion", where to calculate sustainable competitiveness, the current evaluation ratings of the analysis are applied showing (positive or negative) development trends over the past five years. According to the rating of sustainable competitiveness there are favorable and critical results (Global Sustainable Competitiveness Report, 2013).

— In addition to the Nordic countries, followed by other North-Western European countries, there are only three that are not part of the European Union: "New Zealand is 13th, South Korea is 16th, and Japan is 20th."

— Among the four Scandinavian countries, as well the Nordic countries including the Baltic States and Slovenia leading in the top 20, Sweden is the leader of the top 1 in sustainable competitiveness.

— In this indicator of 2017, in comparison with 2013, the United States occupies a low position in the ranking (29th place) not only in resource efficiency, but also in social capital-undermining the global authority of the United States in the future, and from the large economies (BRICS) China occupies 32nd place, Brazil-42, Russia-43 and Azerbaijan-126 (Global Sustainable Competitiveness Report, 2017).

— The rating of natural capital and resource intensity is the main tool necessary to ensure rich biodiversity, climate improvement and sufficient water resources. The difference between developed and non-developed industrial countries is clear, indicating that the least developed countries will experience the least difficulties due to future restrictions on raw materials and energy.

— The difference between Asian countries (Singapore, South Korea, Japan, China), which hold the honorary title among the growing innovative ideas in the ranking of sustainable competitiveness, and north-western European countries is that unlike Asian countries that have limited capital due to high resource intensity / low resource efficiency, European countries are socially cohesive nation that is the result of success in social economic growth (World Economic Forum Report, 2017).
To assess sustainable competitiveness, 65 out of 73 indicators were analyzed on the basis of existing evidence collected by the "World Bank, the IMF and a number of UN agencies (UNEP, UNDP, WHO, WTO, FAO, UNESCO)".

1.3. Definition and main aspect of industry’s sustainable competitiveness

The regulation of the production structure in industry and in the business environment means the promotion of sustainable industry, where the concept of industrial policy is the willingness to support and change the integrated method of sustainable development, which is closely linked not only with industrial but also with economic, social and environment policy.

The most important aspect in achieving sustainable development is the human factor (present and future generations), where, due to their needs and responsibilities, sustainable development has acquired a further development opportunity through the changes made by the Amsterdam Treaty. Currently, under article 2, the priorities of the European Union are to ensure the development of employment and social protection, promote competitiveness, improve the quality of the environment and improve the standard of living and quality of life, which are directly linked to the pillars for achieving sustainable development in innovative and competitive industries.

Furthermore, under the articles 2 and 6, along with article 174, the European Committee declares that, in order to improve environmental and industrial policy, it is essential to take into account all compulsory areas of costs and benefits, namely environmental, economic and social problems requiring immediate consideration in order to ensure an enabling environment for a competitive industry, in accordance with article 157. Because allowing for the current situation, price policy is an integral component in the implementation of mutually beneficial trade between (economic, social and environmental objectives), which must be correctly distributed for sustainable industry development (Hansen, 2012).

1.4. Definitions and aspects of industrial competitiveness

A significant advantage of local enterprises is the ability to strive for the desired result along with international competitors without any monetary or in-kind assistance in the industry level of competitiveness from the state, institutions, or individuals. Characteristics of competitiveness plays a significant role in indication of the balance sheet profit at the industry level of "Local enterprises, the country's trade balance, Foreign direct investment in the country or countries of origin, and Direct costs and quality". The achievement of an enterprise by peculiar factors is usually difficult or impossible to copy because of the complex development, which proves the productivity of competitiveness at the industry level (Shatrevich, 2014).

At the industry level, competitiveness is an important aspect that is in demand among national markets to achieve sustainable development, in competition with foreign markets. The productivity of competitiveness at the industry level is significant because the development of one firm is generated by certain conditions, it is not easy or impossible to expand. And the success of various national firms in the industry is always obvious, and should be improved or expanded. In addition, the competitiveness of an enterprise at the industry level may be subject to monopoly rents, government support or real efficiency (Michael, 2017).

According to Porter, international free trade is a system that provides an opportunity to provide the needs of consumers with free resources to maximize the productivity and profits of a particular industry, where according to porter's assumptions, it is international industrial competitiveness.

In other words, the competitiveness of international industry plays an important role in international free trade. Despite the various arguments of Porter and Jin Bei, the theory that one country is trying to sell its products in a particular industry in order to be competitive in the international industry, the views are unanimous, because competition is important for the growth of the economy, and in order to be competitive in a sustainable environment it is necessary to constantly develop by selling products/services improving the infrastructure of a certain industry (Richard, 2016).

1.5. Definition and main aspect of company’s sustainable competitiveness

According to the report of the Smart Company, which is a leading small business publication, it informs that the business is a competitive environment. Proof of this is the technology where many entrepreneurs have managed to save money by
trading in the virtual and international market, in that way attracting more and more consumers. However, the
development of a virtual environment is a common type of active competition, which creates some difficulties in
promoting the company in a sustainable competitive environment to get more opportunities such as (sales, profits, and
customer audience) than competitors. According to the official sources of Smart Company, as well in opinion to the
authors Brian Hill and Scott Miller, the following steps should be taken to realize a competitive advantage in a sustainable
company (Smart Company Report, 2018).

1. The foundation of the market and market share. Search for underdeveloped services from competitors for profitable
sales in the target market.
2. Profitable offers and consumer demand
3. Creating value for successful promotion of business-to-customer (B2C) or business-to-business (B2B)
4. Creating an innovative business model to support and realize value for the selected market

The features of these steps lies in a precise understanding of the goals for the implementation of sustainable business in a
competitive environment, because the consumer or market audience is a valuable element in the long or short term,
providing the domestic market with a sustainable profit from sales invested to promote the company in a highly
competitive environment (Baumgartner, 2014)

In addition, sustainable competitiveness is a primary division in marketing, helping to understand the relevant aspects to
support the value of the product/service, creating confidence in the working team in pick out a clear strategic solution for
consumers, helping consumers to assess the importance of products/services along with competitors.

1.6. The measurement of competitiveness

The world economic forum is an organization that has an unprincipled advantage in the qualitative dimension of
competitiveness. It is classified the nation at various levels of development (factor-driven, efficiency-driven, innovation-
driven stages) with the accepted rules of GDP per capita to point to the existing factors (Global Competitiveness Report,
2010).

Measuring the competitiveness of countries is divided into 12 separate pillars, which are classified into coefficients
consisting of institutions, infrastructure, macroeconomic environment, health and primary education. These aspects are
called fundamental, because for countries at an early stage of development, to develop these aspects are the highest
priorities (Mar, 2017)

The next factor is the "efficiency enhancers", which includes the functioning of goods, labor and financial markets, as
well higher education and training, as well training willingness, which assesses how well the economy is configured for
the transition to a more developed, learning-based economy. In order to be sustainable and competitive among the best,
the country needs to focus on the following aspects as "Institutions, Infrastructure, Macroeconomic environment, and
etc.", where the last elements consisting of two aspects such as "business sophistication and innovation" (Amelia, 2017)

This comprehensive level of competitiveness which requires a greater attention to the economy sends to the enterprises
and research institutions levels of scale, and innovation that supports the government. Developed countries tend to have
high gross domestic product per capita.

2. The case of Azerbaijan

2.1. The global competitiveness in Azerbaijan

According to the report of the world economic forum, along with 144 countries, Switzerland, Singapore, Finland,
Germany, Japan, Hong Kong, the Netherlands, the UK, Sweden and the United States, which are in the top ten, being
representatives of global competitiveness for several years in a row (e.g. Figure 3). However, despite the effective pace
of these ten countries, Azerbaijan as well continues to grow in the list of countries of global competitiveness, where it
ranks 35th compared to the EU countries, such as Lithuania, Latvia, Poland, Italy, etc., where it occupies 41-80 place,
and regional countries: Turkey, Georgia, Russia and Iran (Global Competitiveness Report, 2008-2017).
Figure 3. Global Competitiveness Index (GCI) rankings, 2008-2018
(Source: by the Global Competitiveness Report 2008-2017)

The reason for the low competitiveness rating of "Azerbaijan" and the decision:

— Firstly, after the crisis of 2014, GDP growth in Azerbaijan began to fall rapidly, which led to a decrease in economic stability (e.g. Figure 4), which subsequently affected the extremely important areas such as health and educational institutions, since these institutions in Azerbaijan are extremely in demand for sustainable life-activity. In order to ensure sustainable competitiveness, it is important to pay attention to such factors as "Financing, Inflation, Government instability, Tax rate, etc. (e.g. Figure 2)" to maintain economic growth in the country. – (World Economic Forum, 2017)

— Secondly, because of the crisis, oil and gas prices began to fall rapidly, and the inflation rate rose to 2.8%, which led to a shortage of capital for the improvement of existing sectors as agriculture. Since ancient times, agriculture has been widely developed in Azerbaijan, and according to experts, it portends success by 2025, and in order to improve such sectors, the country's economy received investments from all sources from 2003-2017, amounting to $ 236 billion. – (Hassan, 2013)

— Thirdly, because of the circumstances, the political position is as well in distress because of "Government instability, Public policy, and the Amount of control in the government", which is a consequence of corruption, poor work ethics, limited labor standards, etc. To resolve the situation in the country, the commander-in-chief signed a decree on conducting a new reform against corrupt officials, regulating the pension fund and human rights, reducing tax rates from 4% to 15%, etc. (Ali Abbas, 2013).

Figure 4. Real GDP growth in Azerbaijan
(Source: by the "CEIC Data's Global Database")

Along with the significant problems, over and above the methods of their solution, Azerbaijan is an independent republic, striving for sustainable improvement of the competitive economy of the country, developing industries for instance "Energy Industry, Mining Industry, Agriculture Industry, Tourism Industry, Science and Technology Industry, Banking Industry, Manufacturing Industry, and Telecommunication Industry" (WorldAtlas, 2018)
2.2. Competitiveness of technology industrialization in Azerbaijan

A significant advantage of the industry is that it contributes to the implementation of new innovative ideas that are vital to maximize profits and in the acquisition of technical knowledge. In 2014-2018, the government of Azerbaijan signed an agreement with the United Nations Industrial Development Organization (UNIDO) on the development of a global and sustainable economy in Azerbaijan, where the strategic benefits of growth will be valid in 2020. The priority of this arrangement is that it will help with solutions, as well serve to develop partnerships for further preparation and improvement of the strategy in the field of sustainable industrialization. It is also important to note that at the present time, Azerbaijan is rapidly trying to develop its sectors in order to be sustainable competitive in the global economy. That’s why, after the collapse of the oil sector in 2012, the key concept in Azerbaijan is the improvement of the information and communication sector, which promises active growth in the field of technology industry from 2012 to 2021 (Pashayev, 2013).

![Figure 5. Industrial ICT competitiveness of countries in exports](image)

Based on the knowledge gained, information and communication technologies is an infrastructure that makes it easy to establish relationships between people and businesses complementing modern technologies based on theoretical definitions of where technologies are "computers, cellular communications, tablets, etc.", created for a large profit, and meeting the needs of users improving technical and system requirements for productivity. Comparing the knowledge acquired about industrial competitiveness, where each country of a particular industry is trying to develop a product/service by selling it, and about the essence of information technology which is a means of automation, for Asian and Western countries such as "South Korea, Japan, China, and the United States" export of information and communication technologies is a significant advantage (e.g., Figure 5), which creates competition for a country like Azerbaijan, which ranks 65th in the world ranking (CEIC Data's Global Database, 2018).

For instance, the South Korean company "Samsung Electronics" for numerous years engaged in the production of information and communication technologies, agitating the growth of the country's economy through trade for export. The company understood that the acquisition of sustainable competitiveness in the global market means a starting point for GDP and economic growth.
Based to the fact, it will be extremely difficult for Azerbaijan to oppose a country like South Korea, which for numerous years has been leading the world market in the production of information technologies. Despite the significant difference in opportunities, according to the indicators of the industrial life cycle (e.g. Figure 6), the information and communication technology industry in fixed broadband and cellular communications continues to develop steadily but slowly, which opens up opportunities for Azerbaijan to focus on providing secure and reliable communications.

Since the competition in 2011, due to the launch of 3G services, from 2016 to 2017, the company AZERCELL has registered 750,000 4G subscribers, where the interest rate is slightly more than 1% of the total customer base, based in the capital and in the ABSHERON Peninsula. (See Table 1)

The mobile market in Azerbaijan has seen moderate growth over the past few years. Market penetration has increased from 107% in 2013, to over 110% by 2017 (Alakbarov, 2017).

Table 1. Azerbaijan’s mobile operators, network coverage, and ownership, 2017

<table>
<thead>
<tr>
<th>Operator</th>
<th>Mobile Telephony</th>
<th>Coverage</th>
<th>Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZERCELL</td>
<td>99.8% population 80% territory</td>
<td>All major cities</td>
<td>Baku, Seaside National Park, Absheron Peninsula</td>
</tr>
<tr>
<td>AZERFON</td>
<td>80% territory</td>
<td>Main towns and cities</td>
<td>In deployment</td>
</tr>
<tr>
<td>BAKCELL</td>
<td>99% population 93% territory</td>
<td>Feb-14: 80% population 55% territory / Baku</td>
<td>Commercially launched in early 2014</td>
</tr>
</tbody>
</table>

(Source: by R.G. Alakbarov, 2017)
Conclusions

At the time of the economic crisis, the government of the Republic of Azerbaijan is actively involved in the development of a new strategic solution along with the many failures faced by countries with developing industry in a competitive environment. Competitiveness is a concept that pushes the economy of any country to compete with each other to improve domestic productivity, and to be competitive. However, competitiveness and sustainable development is only a concept that provides basic opportunities for individual sectors, but does not provide an exact solution for the sustainable development of the country.

Based on the research in the article (according to the report of the global CEIC database), countries such as "China, Japan, South Korea, and the United States’ are major suppliers in the field of ICT, which proves the reason for the unstable solution of the agitating economic inequality and opportunities possessed by developed countries. In order to confront developing countries, small countries with unstable economies like Azerbaijan are attempting to interact with each other for sustainable development in a competitive environment. Firstly, it received investment along with a mired financial crisis that hit the vital infrastructures of the health and education industry. Secondly, it clarified new sources of income from existing sectors such as agriculture and ICT capable of sustainable development. Thirdly, it has resolved the internal political situation in the country caused by these events interrelated, which proves the importance of the concept of competitiveness and sustainable development.

For the reason that, the research of the article applies the following concepts of competitiveness as "Measurement of competitiveness consisting of 12 components (in terms of global competitiveness 2017-2018), Industrial competitiveness, industrial life cycle of ICT development", which are an excellent tool recommended for use for countries in the initial stage of economic growth.

References


