



Original Article

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Pathology of Technology-Based Business in Iran in Terms of Economic Sanctions

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ABSTRACT: Technology-based business (TBB) is the driving force of knowledge based economies. Accordingly, planning to improve the environment of TBB is an effective factor for the sustainable development in any country. However, due to economic sanction and inflation, in our country, TBB are the focus of various environmental challenges. Using a qualitative and practical approach, this study based on Fuzzy Delphi Method, investigated the pathology of national TBB environment in economic sanction. This study aims to find challenges from the sanction in front of national TBB for growth and development of their activities. The process led to extract and prioritize challenge of sanction on these businesses in direct negative and indirect negative impacts category. The study results are a preface to solve problems of TBB and strengthen national ability against sanctions.

KEYWORDS: Technology-Based Business, Economic Sanction, Negative Effects.

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1. INTRODUCTION

The introduction of the revolutionary evolution of knowledge in modern economy and its key role in producing productions has generally changed the face of economy so that not only the production volume is not a precise criterion for assessing a country's economic power, but also the rate of production and export of knowledge and technology-based products is considered as a modern criterion for measuring the national power of a country (Sobhani & Rizvandi, 2012). Technology-based enterprises are the main factor in increasing productivity and economic growth and active and stable presence in scientific fields and international trade in a country (Behbudi & Amiri, 2010). Therefore, the prosperity of knowledge-based enterprises will lead the country to achieving sustainable, technology-based and pioneer economy.

Accordingly, in our country, to make a fundamental change, the main approach of the national development programs has also been targeted to technology-based economy and on Iran's Holistic Scientific Map and also the principle of resistive economy; the development of technology-based enterprises has gained special attention. Despite all unique features of small technology-based enterprises and their main role in sustainable development of communities and economic growth in the world, unfortunately, they have much higher probability of failure compared to large enterprises (Azar et al.2010).

Therefore, on one hand, small technology-based enterprises are considered as the main factor of countries' economic growth and industrial development and on the other hand, they are highly susceptible to numerous problems and high failure rate. Obviously, this can be exacerbated in economic sanctions and inflation. In other words, unstable economic conditions and environmental stresses such as sanction challenge can create multiple threats, quite different situation and even opportunities for technology-based enterprises.

Since our country is involved in policies for coming out of pressures from sanction for years, so, given the fundamental role of technology-based enterprises in national economic plans now and in the future, these enterprises will obviously be the focus of positive and negative effects of economic sanctions. In the current study, by a qualitative approach and based on a scientific and systematic process, it is tried to identify challenges from sanction on such enterprises in national technology-based business environment including direct and indirect negative effects and present these effects in an appropriate context. Thus, through proper planning to solve these problems, the national ability to cope with sanction will significantly rise within the framework of resistive economy.

2. LITERATURE REVIEW

Regarding several stages of sanctions on Iran's history, some researches have investigated the several effects of economic sanctions in Iran. Most of these studies focus on trade and economic characteristics. For an overview, Table.1 shows some these researches on the base of subject and year category. Survey research in the field of sanctions in Iran shows that despite the importance of TBB on developing of the country, scientific study of the sanctions effects on the TBB performance has not been yet performed in Iran.

In fact, the present study with an applied and scientific approach tries to determine the threats facing Iranian TBB in terms of sanctions.

Table.1 Effects of economic sanctions on Iran, in several researches

Ref.	Subject	Impact	year
(Ajily & Keshavarz,2010)	Impact of sanctions on Economic Development in Iran	Economic	2014
(Farahani & Shabani,2013)	The Impact Of Sanctions On Iran's Tourism	Tourism	2013

(Husseiny,2013)	Iranian Economy in terms of sanctions	Economic	2013
(Bigdeli et al.2013)	The effect of economic sanctions on Iran Trade	Trade	2013
(Emadi .2012)	The impact of economic sanctions on human rights	Human rights	2012
(Valizad,2011)	Theories of international sanctions Performance in political economy	Political economy	2011
(Miremadi,2011)	Coping with sanctions from the National Innovation System view	Innovation	2011
(Aziznejad,2010)	The effect of sanctions on the Iranian economy, emphasis on foreign trade	Foreign trade	2010
(Motaghi et al.2010)	Effect of 19 resolutions on Iran's economy	Economic	2010
(Mehregan et al.2004)	Impact of sanction on Iranian Hi-Tech Industries	Technology	2004
(Motaghi ,2000)	Impact of economic sanctions on Iran's national security	National security	2000

3. THE IMPORTANCE OF TBB IN NATIONAL ECONOMY

After passing digital and network economies, the third wave of information age is based on economy and technology-based organizations (Halawi, 2005). Based on studies by APEC, the most stable economies in the world are related to technology-based economies (Memarnejad,2005) and among them, small technology-based enterprises are the driving motor of the development of these economies(Massa & Testa,2009). Given the key role that Small and Medium Sized Enterprises (SME) have so far played in the field of technological progress in the world, in the knowledge-based economy, a special approach has also been formed in such institutes (Carson, 2005). The activity of small technology-based enterprises in developed or developing countries indicates a type of close and effective relationship between economic-social progress of these countries and development of the enterprises. Small technology-based enterprises are usually established to transform ideas and innovations into product, create sustainable technology-based jobs, commercialize researches and guide graduates for successful entrance into business environment by entrepreneurs who have specific proficiencies (Momenti et al.2012). On the other hand, technology-based enterprises are the main factor to increase productivity and economic growth in a country (Behbudi & Amiri, 2010), (Arabi and Dehdashti, 2009). Therefore, prosperity of technology-based enterprises will lead the country to achieve stable and pioneer economy. In addition, through increasing technological export in a country, technology-based enterprises will cause to increase the country's share and role in international trade (Sobhani & Rizvandi, 2012). Other role of technology-based enterprises is in social and political dimensions. Technology-based enterprises will be a factor in creating added value, expanding social welfare and decreasing poverty (Nezamian, Aslamifari, 2010). These entrepreneurial companies provide proper opportunity for employment in community through combining resources and cause more balanced wealth and income and contribute to their happiness (Mehralizadeh, Sajadyi, 2009).

Finally, since the knowledge-based enterprises have a direct role in creating the added value and exchange technology, they are considered as important enterprises for national economy in developing (Fakour & Ansari,2010),(Karimi & Hassanpour,2011). Therefore, technology-based enterprises are the main factor for creating sustainable development and growth in global arena and economic development in countries. Thus, creating proper environment for flourishing such

businesses and preventing serious environmental threats facing these enterprises are one of the basic strategies in many developed and developing countries. Unfortunately, in terms of knowledge based economic development, World Bank studies shows that our country has no good status among regional countries. Table 2. shows results of this ranking in 2012. Accordingly, it is necessary to more consider development of technology-based enterprises as the driving force of technology-based economy.

Table 2. Ranking of regional countries in terms of knowledge based economy

Rank of Country	Israel	UAE	Bahrain	Oman	Saudi Arabia	Qatar	Kuwait	Turkey	Armenia	Kazakhstan	Jordan	Azerbaijan	Lebanon	Iran
2012	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1995	1	3	2	9	11	4	5	7	10	12	6	15	8	18

Since in our country, sanction has been one of the most important political-economic challenges in the past 35 years and has led to severe economic tensions in the environment of national businesses, therefore, challenges from economic sanctions in technology-based business environment and problems and barriers of these enterprises in sanction conditions are studied.

4. DYNAMIC INVESTIGATION OF THE EFFECT OF ECONOMIC SANCTIONS

Within the past 35 years, Iran has been the focus of sanctions in 6 stages: hostage period (1979-1981), Iran-Iraq war (1981-1988), Re-construction Period (1989-1992), Presidency Period of Clinton, Dual Containment (1993-2001), September, 11 Attack (2001-2006) and Presidency Period of Ahmadinejad until now that five resolutions have been adopted against Iran in UN Security Council. One of the significant issues in this field is the rate and way of affecting these sanctions.

The outcome of survey and review of the study literature, integration of multiple scientific sources and various ideas on the likelihood of sanctions and its dynamic effect is the diagram presented as a model in Figure 1. However due to the complexity of political-economic issue, neither this diagram nor other models can alone cover all the issues. Obviously, there exists even a considerable controversy between traditionalist theorists and revisionists on how to influence sanctions. Therefore, many researchers seek to prove the uncertainty in predicting the performance and influencing the economic sanctions (Hufbauer et al. 1990) while it is thought that the framework proposed in this study obtained based on reviewing the study literature and summarizing the results of previous research is useful in explaining the political behaviors of sanctions from the economic perspective despite simplicity.

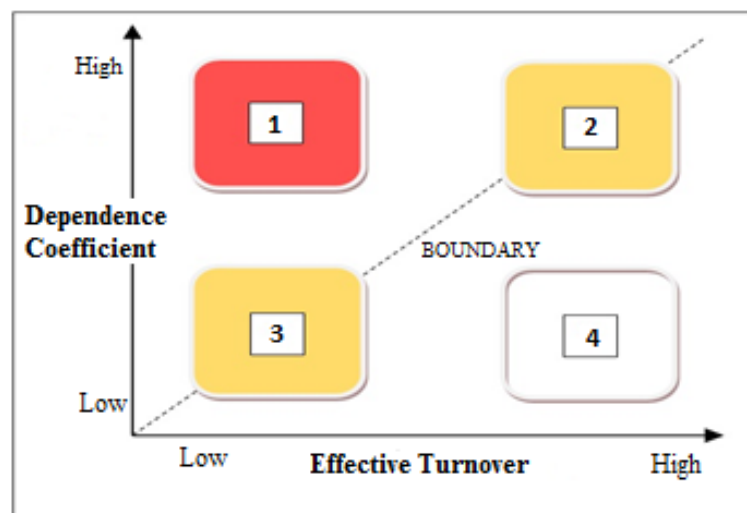


Figure 1. Diagram of probability and influencing sanctions from the economic perspective

The diagram introduced as “the diagram of probability and influencing sanctions from the economic perspective” includes two quality axis of effective turnover and axis of dependence coefficient. Dependence Coefficient qualitatively shows the rate of economy- and industry dependence in a country compared to other countries in terms of the supplement of basic commodities, raw materials, needed technologies for the country, information systems, etc. The axis of effective turnover also indicates the sum of the products of two internal markets and export of strategic commodities as an effective turnover. Strategic commodities are products which have many applicants; are produced in few countries and usually their effects on the economy of other countries are tangible. In addition, the mentioned diagram includes a border line indicating the probability boundary of success in sanctions.

In this model diagram, four modes can be observed: in the case that a country has low effective turnover (small internal market or no export of strategic commodity) and on the other hand, its dependence level is also high, the country is in the red situation. In this situation and in terms of political conflicts with powerful countries, with respect to economy, the possibility of sanction against the country is very high and being affected by sanctions and the likelihood of success of the sanctions is also high. However, if a country has big internal and external markets and high effective turnover, its dependence coefficient is low and reasonable such country is in white condition. Certainly, the likelihood of success and impact of sanctions against the country is very low.

Modes 2 and 3 are a bit more complicated. If a country has a small turnover and low ratio of dependency or vice versa, such countries will be placed on the diagram border and in the yellow status. The Likelihood of the effect of economic sanctions will be high in the possible international conflicts but it will be dependent on other factors. In the case of sanctions, one of the common issues in such circumstances is that the sanctioned country may not be submitted in any form but sanctions will cause detrimental effects on the economy of these countries. Years of sanctions and its non-submission clearly specify its certain economic conditions in the border of the diagram.

According to the diagram, in vulnerable positions (positions 1, 2 and 3), by increasing the rate of internal production, the production of technological products and access to international markets and reducing the country's dependency coefficient, especially in technological products (because of the limited replacement in the world countries as sanctions) these conditions can be modified toward safer conditions (position 4). If technology-based businesses are in a country,



properly functioned, they will truly have such potentialities in themselves. Therefore, improvement and promotion of these businesses environment can substantially modify the status of a country in terms of vulnerability coefficient of sanctions.

As mentioned, the proposed model is based on the review of the study literature and is quite consistent with theories in the study literature. For instance, researchers believe that the more the subject is dependent on a particular commodity in international trade (high dependency coefficient), the more the possibility of sanctions would be against that country (Jentleson, 2001). The higher the proportion of countries in international trade (great effective turnover), the less the possibility of sanctions would be against them (Hafner & Montgomery, 2008). Localization of production technology and reduction of importing technological products (reducing the dependency coefficient) is one of the basic approaches to deal with sanctions (Aziznejad, 2010). One of the key aspects in the power of the target country for defending against sanctions is the ability to mobilize its economy for supplying internal need (Valizad, 2011). This causes the dependency coefficient and to increase the internal market.

As a genuine example, North Korea with low per capita Gross National Product and non-visible proportion of the global market and lack of exporting strategic commodity (small effective turnover) and small import rate (low dependency), is in the position 3 on the diagram. However, China and India with very large internal and external markets and low and reasonable dependency coefficient show position 4 on the diagram. Economic sanctions of the two countries in 1989 and 1998 were completely negative and almost failed. The main reason for the success of India and China at the disposal of sanctions was the government's policy and timely recognition of the opportunity for the growth and development of technology and their innovation system (Miremadi, 2011).

So, it can be said that the regime of sanctions is effective on the technology-based business environment and knowledge-based enterprises are effective in the control of pressures from sanctions. Therefore, the effects of sanctions on the performance of components of technology-based businesses will be as an interaction and in contrast with each other that the challenges will be addressed at following.

5. METHODOLOGY

Pragmatically and descriptively as well as using a qualitative and functional approach, the current study has investigated the pathology of national technology-based business environment under sanctions. The present study aims to find challenges from sanction in the national technology-based businesses environment for sustainability, growth and development of practices of these enterprises in knowledge chain from idea to product. In this study, after examining the vital role of these enterprises in national economy on one hand and reviewing the sanctions literature on the other hand, through analyzing data including statistics of valid internal and external units and the convergent results of related research, threats of growth and development of technology-based businesses in Iran were extracted as the primary factors by the reference group and then, in addition to editing these factors as the initial questionnaire, the negative effect of sanction on the performance of technology-based institutions were explored. Then the reliability of the questionnaire was confirmed by SPSS software. Then, by selecting 19 experts, the issue was evaluated in the country via a targeted method and Delphi Fuzzy Method during two phases of fuzzy poll and required consensus was achieved. Finally, the fuzzy results were analyzed using computational MATLAB software which led to present a framework for negative effects of economic sanctions on the growth and development of TBB.

5.1. Research Process

After reviewing the position of technology-based companies in the country's development and the importance of technology-based enterprises in national economy, we now examine the impacts of sanctions on the performance technology-based companies. To evaluate the issue from a qualitative perspective, the present study tries to scientifically use the opinions of experts in the country in order to draw a real good picture of the threats. Then, the negative impacts of economic sanctions on the performance of technology-based enterprises in the country have been evaluated using the Delphi method.

In the Delphi method, the use of structured guidelines gives more accurate results than that of conventional surveys. But since in the real world, problems cannot be regarded merely as digital and "zero-one" and are generally included in a range, the use of crisp numbers in the Delphi method may also lead to the results that are not consistent with reality.

Thus, it would be useful to use linguistic variables by experts. This has led to the creation of a fuzzy Delphi method, which covers many obstacles related to lack of clarity, by providing a flexible framework. In this technique, the data are represented as fuzzy (rather than absolute numbers). Figure.2 shows the relationship between these linguistic variables and respective fuzzy numbers.

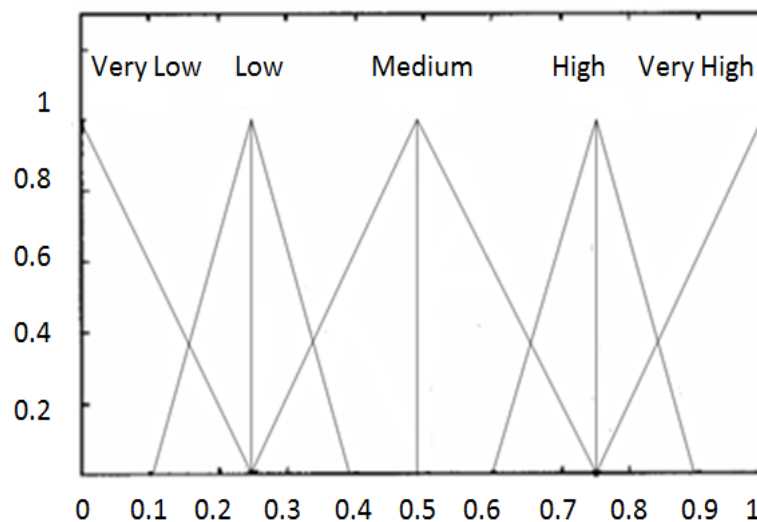


Figure 2 . relationship between linguistic variables and respective fuzzy numbers.

To perform this method, the choice of qualified members for the Delphi panel is considered one of the most important steps of the method. Contrary to what is common in quantitative surveys, experts are not chosen based on probability sampling, because the Delphi method is an expert decision mechanism that requires the highly qualified specialists who have a deep knowledge and understanding of the subject of study. Purposive or judgmental sampling is one of the methods used in the selection of experts. The purposive sampling is based on the assumption that the knowledge of researcher can be reliable to select the panel members. This method was used on the basis of practical knowledge and experience of the authors. In this regard, twenty Iranian experts were selected as four groups of Delphi panel:

1 - Managers of technology-based enterprises selected in prestigious national festivals, which objectively face with a variety of challenges and opportunities under sanctions and are considered the most reputable authorities on this subject.



2 - Incubators and technology parks managers who involve a lot of problems of technology-based enterprises in the country due to protectionist policies.

3 – Managers of risky financial and credit funds, which are intimately familiar with the threats and opportunities of the firms, because of investments in innovative projects and participation in the establishment and development of technology-based firms.

4 - University lecturers who can offer opinions as expert researchers and theorists on the economy under sanctions.

Then, according to the analysis made in the previous research, all information and statistics were examined by a small group of experts as the reference group, and nearly 30 indicators were extracted as the impacts of sanctions on the performance of technology-based enterprises in the country.

After the reference group was confirmed, the indicators were classified into three groups:

Direct negative impacts and indirect negative impacts. Then, with further research and the extraction and integration of similar indicators, 14 indicators were finally selected according to Table 3, based on which a questionnaire was prepared by the reference group for the implementation of the Delphi technique.

The questionnaire was developed based on the 5-point same as Likert scale (from unimportant to very important, by linguistic variables); and the collective opinions of experts were used to increase its validity, and then the questionnaire was finalized. In addition, the above questionnaire was formed as semi-structured in order to use the possible opinions of all the experts during the Delphi process. Thereafter, the Delphi process was carried out step by step.

Initial indicators of the sanctions negative impacts on TBB		
Direct negative effects	1	Limiting access to high quality equipment, special research and laboratory tools, parts and raw materials required by knowledge-based companies.
	2	Crippling the Iranian banking system, and making difficult the international financial relations of knowledge-based companies through the banking system.
	3	The problem of exporting technological products, and the loss of export markets for certain knowledge-based companies
	4	Increasing risk of investing on localized technologies by knowledge-based companies
	5	Exchange rate fluctuations, inflation and economic instability, impossibility of planning, and unpredictability of the future
	6	Stabilization of unofficial routes for the import of goods such as imports of intermediate goods, international black market and “draft economy”
	7	Restrictions on the processes of technology transfer, business communication and cooperation with large companies having technology and scientific centers in the world.
Indirect negative	8	Lowering government revenues and thus reducing research budgets and government support

9	The high interest rates on Iranian bank loans compared to other countries due to the inflation intensified under sanctions
10	An increase of intermittent pressures caused by sanctions and frequent changes in economic and bureaucratic government policies to confront these problems
11	Providing unreal statistics to make the economic conditions look normal, and lack of KBFs' access to accurate information
12	Stagnation of the industry and decline in the boom of domestic market, numerous problems with sales and marketing and as a result, financial problems for SMEs and especially knowledge-based enterprises
13	More acute manifestations of the problem of mediation and brokerage under sanctions, due to economic instability and the tendency of capitals from the creation of technology to brokerage
14	Taking away the incentive from technology entrepreneurs due to the exacerbated problems

Table 3. The indicators selected by the reference group

5.2. Implementation of Fuzzy Delphi Method

After coordinating with the group of experts, the experts' opinions were collected in the first round by offering the questionnaire based on the linguistic variables and the complete cooperation of panel members. Based on the results, for each of the indicators, the fuzzy average was calculated by following formula (Cheng & Lin, 2002):

$$A_i = (a_1^{(i)}, a_2^{(i)}, a_3^{(i)}), \quad i = 1, 2, \dots, n \quad (1)$$

$$A_{ave} = (m_1, m_2, m_3) = \left(\frac{1}{n} \sum_{i=1}^n a_1^{(i)}, \frac{1}{n} \sum_{i=1}^n a_2^{(i)}, \frac{1}{n} \sum_{i=1}^n a_3^{(i)} \right) \quad (2)$$

In this equation A_i and A_{ave} are i th expert opinion and average of experts opinions respectively. Due to the large volume of computing in fuzzy Delphi method, to increase the accuracy and speed of information processing, an algorithm for the calculation of “fuzzy sets” based on their equations, was adjusted. The algorithm is shown in Figure 3. Software algorithms to compute the corresponding code in MATLAB-(R2010b) software as a computer program was written. So, proper software program to calculate the triangular fuzzy numbers, fuzzy mean and fuzzy average with the help of MATLAB software was provided. Its input is experts Views, based on linguistic variables. The output of the program is fuzzy result that evaluated for each character.

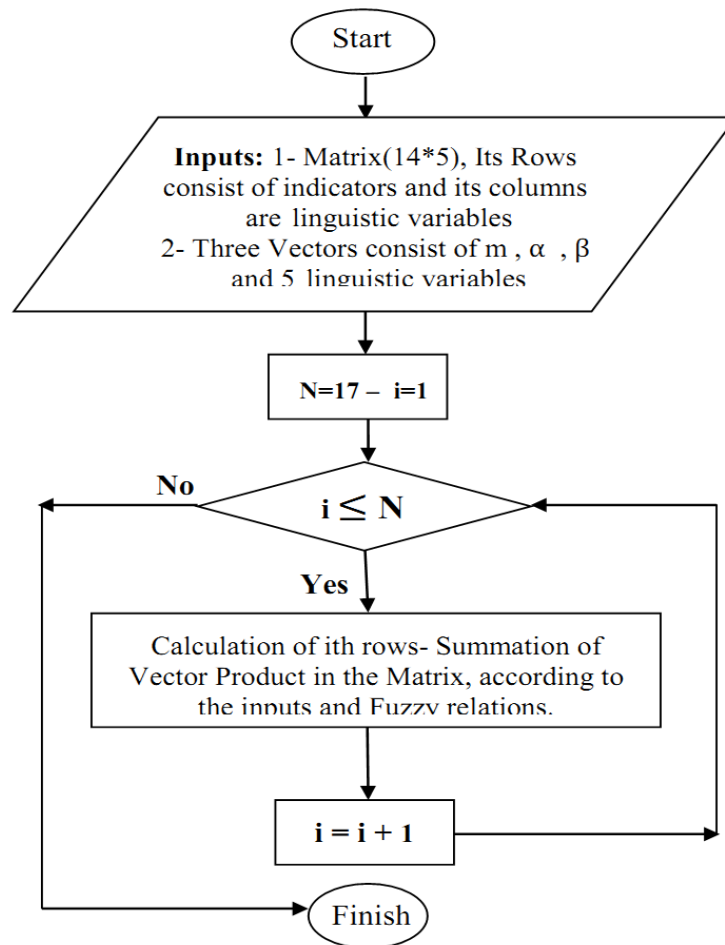


Figure 3. Algorithm adjusted for the calculation of “fuzzy sets”

Accordingly, among the 14 indicators discussed, one very less important indicator, two controversial cases and 11 important indicators were recognized in the first Delphi round. First round results show in Fig.4. In addition, considering the semi-open nature of the questionnaire, the experts confirmed the generality of the questionnaire, which is a sign of its reliability.

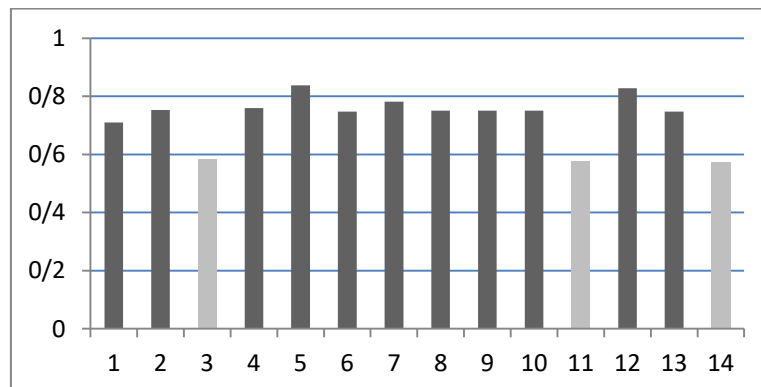


Figure 4. First round results

In the second Delphi round, all the results of the first round, along with the questionnaire, were again provided for the panel members. According to the opinions of the experts in the second round, an indicator was identified as not important, two indicators as less important, and other indicators as important factors affecting the performance of technology-based enterprises under sanctions. Second round results show in Fig.5.

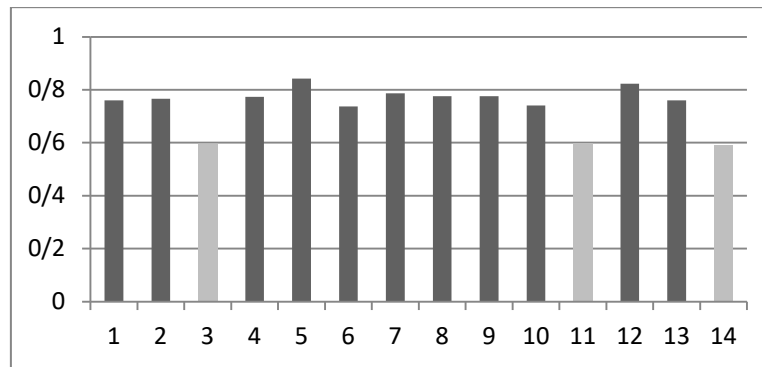


Figure 5. Second round results

Although there is a consensus of opinion on the threshold of agreement in the Delphi method, some of the references explain that the change percentage of less than 15% in each round is also considered as a sign of consensus (Culley, 2011). Other ones explain if the difference between tow round is less than “very low threshold” (0, 1), Survey stops (Cheng & Lin, 2002).

Difference between tow round is calculated by following formula:

$$S(A_{m_2}, A_{m_1}) = \frac{1}{3} [(a_{m_{21}} + a_{m_{22}} + a_{m_{23}}) - (a_{m_{11}} + a_{m_{12}} + a_{m_{13}})] \quad (4)$$

Since the second Delphi round in this study, satisfied both conditions, the consensus in the Delphi process was obtained with a very good approximation. Results are listed in Table 4.

Table 4. Result of implementing fuzzy Delphi process

Indicators		Average triangular fuzzy				Final result
		First round	Second round	Deviation	Percent change	
Direct negative effects	4	0.7094	0.7599	0.0505	6%	Ok
	5	0.7531	0.7664	0.0133	1.7%	Ok
	6	0.5844	0.5921	0.0077	1.3%	Not ok
	7	0.7594	0.7730	0.0136	1.7%	Ok
	8	0.8375	0.8421	0.0046	0.5%	Ok
	9	0.7469	0.7368	0.0101	1.3%	Ok
	10	0.7813	0.7862	0.0049	0.6%	Ok
Indirect negative effects	11	0.750	0.7763	0.0263	3.3%	Ok
	12	0.750	0.7763	0.0263	3.3%	Ok
	13	0.750	0.7401	0.0099	1.3%	Ok
	14	0.575	0.5954	0.0204	3.4%	Not ok
	15	0.8281	0.8224	0.0057	0.6%	Ok
	16	0.7469	0.7599	0.013	1.7%	Ok
	17	0.5719	0.5888	0.0169	2.8%	Not ok



5.3. Analysis of the Study Results

The final list confirmed by the Delphi experts shows two categories of impact on the performance of technology-based companies under sanctions (Fig. 6). The first category is the negative impacts of sanctions that can directly affect the performance of technology-based companies. The second category includes the negative impacts of the sanctions that, indirectly and/or by exacerbating existing structural problems, have an impact on the performance of technology-based enterprises. In fact, these categories, which show a wide range of problems, are facing the threats to technology-based enterprises under sanctions. According to the experts view, the indicator of "exchange rate fluctuations, inflation and economic instability, impossibility of planning and forecasting of the future" is the greatest direct impact of sanctions, and finally, the indicator of "stagnation of the industry and decline in the boom of domestic market" is the greatest negative and indirect impact of the sanctions on the performance of technology-based enterprises.

Results obtained by the Delphi panel in this study are consistent with the findings of other studies. Scientific studies show that "exchange rate fluctuations, inflation, economic instability and economic uncertainty" - as one of the most important impacts of the sanctions - can increase the risk and reduce investment, value-added of the industry, the rate of output growth and economic growth. This has been emphasized in a great number of studies (Abbasian et al. 2012), (Georji & Madani, 2002), (Eltejaee, 2012). The results of this study also show that the most important negative and direct impact of sanctions on the performance of knowledge-based enterprises is "the exchange rate fluctuations, inflation, economic uncertainty, and impossibility of planning and prediction of the future." Therefore, because of extensive impacts on the main factors in the growth of the economy, industry and technology in the country, this factor is also a serious obstacle to the growth and development of TBB.

The limited production of domestic enterprises, stagnation of the industry and thus the reduced boom of domestic market and national production are the major problems of startup TBBs under sanctions, which, in fact, are the result of previous problems. This is precisely one of the objectives of the countries imposing sanctions against embargoed countries (Miremadi, 2011), (Lopez & Cortright, 1996).

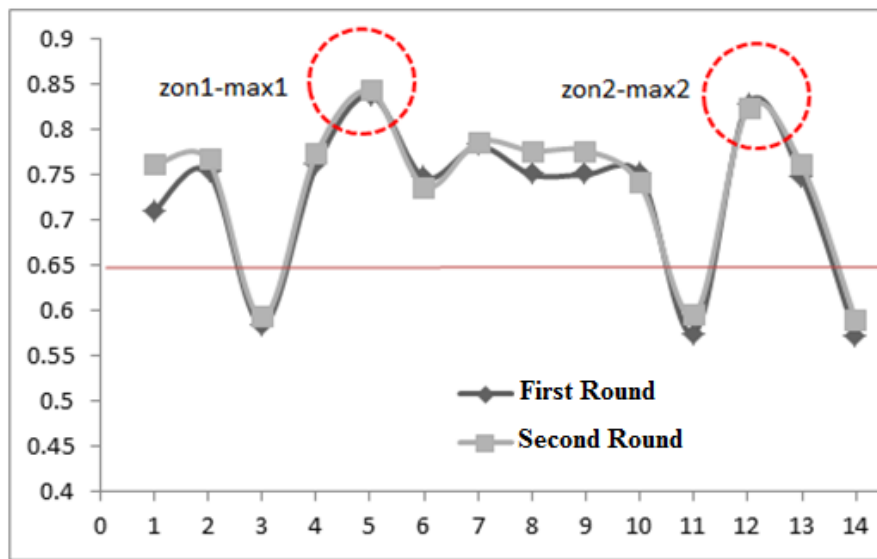


Figure 6. Diagram of implementing Fuzzy Delphi result

As was noted in Figure (1) in this study, lowering the boom in domestic markets is one of the factors that increase the impacts of sanctions. By limiting the domestic exchanges, this creates multiple problems with sales and marketing and then financial problems for almost all industries in general and the startup (especially technology-based) companies in particular due to the fragile conditions. Delphi expert members in this study have introduced this as the most important indirect impact of sanctions.

6. SUMMARY AND CONCLUSION

In this study, the challenges of growth and development in technology-based business environment in sanctions have qualitatively and functionally been explored based on Delphi Fuzzy Method. The result of all previous discussions has been schematically summarized in Figure 7.

According to the study results, index of “exchange volatility, inflation and economic instability” are the greatest negative and direct effect of sanctions; while index of “industry recession and declining of internal market” are the greatest negative and indirect effect on national technology-based businesses environment.

The main accepted hypothesis about the objectives of this study is that due to the structural problems and vulnerability of the economy, sanctions have caused to create relatively large volume of threats for technology-based enterprises. Also, despite the history of sanctions and announcing policies of resistive economy in the country and a great deal of academic research, unfortunately, the opportunities created in the technology-based businesses environment for strengthening the economic status and sustainable growth and coping with sanctions in our country have had major problems in transforming these studies to the technological products because of the weakness of technological system and that the technology-based business environment is inappropriate and compared to many countries, it has inappropriate status in terms of sustainable growth and development.

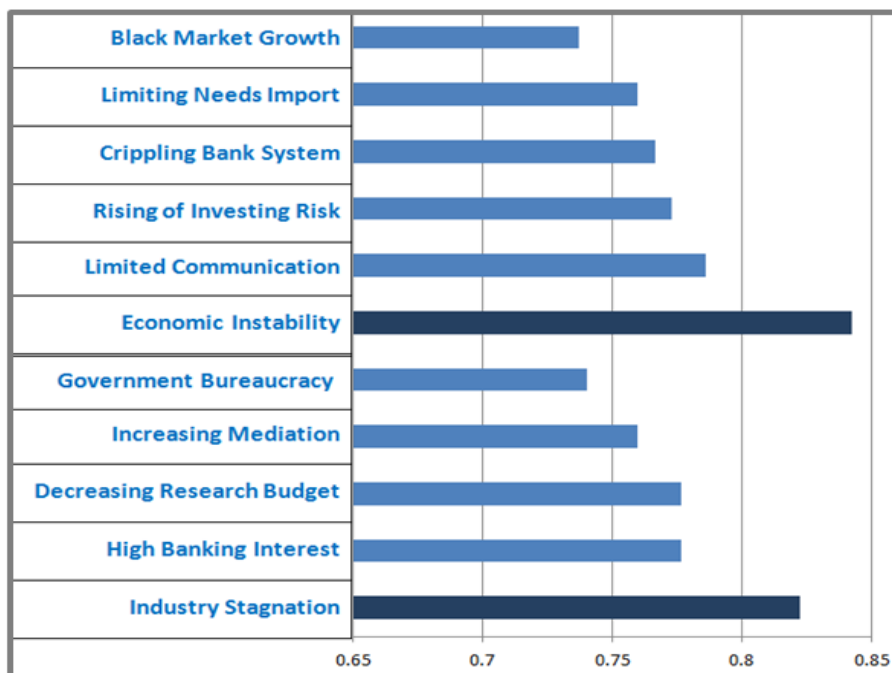


Figure 7. Results of all discussions as a schematic diagram.

Obviously, delays in this issue will hinder progress despite the Perspective Document. The best solution addressed in the study is to use polices of resistive economy and development of technology-based business environment as the motor of development of knowledge-based economies and eradication of their problems, especially in sanctions condition. It is obvious that if the environment of such businesses improves, the country will accomplish additional ability to cope with sanctions.

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ETHICAL CONSIDERATION

Authenticity of the texts, honesty and fidelity has been observed.

AUTHOR CONTRIBUTIONS

Planning and writing of the manuscript was done by the authors.

CONFLICT OF INTEREST

Author/s confirmed no conflict of interest.

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