

CIRCUMSTANCES OF THE INNOVATION AND INNOVATION TECHNOLOGY DEVELOPMENT

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Abstract- It is commitment of any country to create required environment for successful use of knowledge and capacity in different stage of development. Such of country development can be limited by several factors for instance, access, financial resources and any other circumstance to a new technology. In case of development of the company policies is needed to be undertaken in support of innovation and innovation technology application. The fact is that there is main option to consider of acceptance and proper understanding of the country a new technology than simply focusing of purchase facilities for production. It is important an engagement of all sectors of the business being able to achieve expectations in innovation policies. Innovation and innovation technology is the instrument of economic and social progress. It is the predominant source of: the new or improved products, processes, and methods of marketing and organization that drive the competitiveness of our business sector; generate the income that sustains our standard of living; alter the way we interact with each other and the natural world; and solve (and sometimes create) the technical and social problems we face. The key challenges for most economies – intensifying global competition in product markets, increasing demand for energy and other natural resources, and aging of the workforce – render economic competitiveness transient and easily eroded, potentially compromising the wealth of nations that fail to combat them. In addition, the growing pressure of complex, global challenges, such as climate change and financial system stability, suggests that harnessing the innovative capacity of humanity is more critical than ever before. This paper reflects of general aspect of Innovation and innovation technology with concern of importance for the developing and countries in transit economy.

Keywords: Innovation, Innovation Technology, Small Business, Knowledge, System, Scientific Discover.

I. INTRODUCTION

It is necessary to classified type of innovation for the case depends of used innovation behavior. The fact is that it demands to describe innovation technology application for any expected study. It can be demonstrated following type of innovation technology classification [1, 2].

Associated innovation technology – it is an innovation technology has been applied on the base of early achieved and checked challenges (knowledge, system, facilities etc.) optimized integration of innovation technology.

Basic innovation technology – this innovation technology covers the area of applications (systems, machines, technologies, facilities, etc.) based on a new scientific discovers for a future generation scientific production.

Enhancement of innovation technology – this innovation technology is ordered innovation technology with considering of market behavior and circumstances. It is expected to improve product or service based on application of scientific advances, project design-technological achievements, as well as use of a new approaches of management processes.

Improvement of innovation technology – it is development of a new generation machine, materials, type of materials and methods based on improvement of products (goods, work execution and services).

Innovation processes – it is the whole stage of period in transformation of scientific knowledge, scientific ideas, scientific discovers and inventions into the innovation technology.

II. CONTRIBUTION OF INNOVATION AND INNOVATION TECHNOLOGY IN BUSINESS DEVELOPMENT

Today it has come obvious that innovation and innovation technologies take vital place to achieve main targets, which oriented to reach of sustainable business environment and opens wide opportunities for the future challenges. In the other hand innovation and innovation technology provide contribution for a high productivity and economic dynamism. For the time being famous financial Worldwide institutions spending a big of investment for successful use of challenges of innovation and innovation technologies advances in the variety of areas of business in different countries [3-5].

There is no doubt that understanding of the importance of the innovation and application of the innovation technology is a vital subject of a best business environment development in country. It can be pointed out as below issues with criteria:

- (i) "low innovation" – low understanding only a few companies spend finance resources for learning process;
- (ii) countries with the status of "buy" where companies use efforts in application of advances technology and research & development;
- (iii) active in "make and buy" research & development but less attention to know-how); and
- (iv) active in "make" in terms of in-house research & development.

It is necessary to mention that this approach of innovation and innovation technology use is the vital for the young countries such as Azerbaijan and other countries of the former Soviet Union. It makes possible effectively to integrate into the international system meeting those requirements and standards. An existing circumstances demand to consider necessity of consideration of a new business development instead of existing picture in the pass. It starts from the initial stage business development. It relates such aspects as staff development and personal improvement, business environment like creation of competitive circumstance for increasing productivity through performance new products, use and application advances elements of a new business management, providing new areas of market with reflection innovation and innovation technologies application.

One more advantage of innovation and innovation technology use is allowing companies to specialize, work under international standards for achievement business expectations and to improve quality of service as it was mention above. Each of these areas is essential for business to compete/analyze process reached information and thrive in the global economy. It is very important in developing economies or transition economy, which need to undertake approach of application a new product with improved quality product or services meeting customer requirements and satisfaction.

The fact is that development and growing up the business how successfully considered internal external influences to the business in all stage of business development. When we are saying internal factor of business it consists:

- capabilities and capacity of the business;
- nature of organization management; and
- innovation policy of the companies' capacity.

There is advantage of the companies selected philosophy of learning organization. There is no doubt that for improvement of company it is necessary to invest for staff training, research, knowledge enhancement capacity improvement, application and use of modern technology advances which is the best practice related to innovation and innovation technology. It has an influence for achievement the best product quality and reduce the cost and involvement/invitation best customers into the business process.

It can be described external factors with content as existing environment for business development nature and area of the industry of the business characteristics, opportunity to the access to the financial resources, human resources in the market, technology capability and market potential.

The aim and target of innovation and innovation technology use is to point out areas needed to be considered in the first stage of undertake. For achievement of expectations from innovation and innovation technology application is necessary to create appropriate environment. In this regards following options would be vital to consider:

- human resource;
- available sources for creation of the environment for research and development;
- financial capability;
- fundamental nature of the business;
- existing low and required instructions of business environment;
- existing tradition environment for business and culture of the market for and;
- product quality competition in the market.

It demonstrates a wide scale innovation and innovation technology policy approach, which undertakes all existing variety of factors and contaminations and relations between all segments.

There is important point to understand what is required to do for reaching expectation in this area. There is offered to bring ideas to help countries in the innovation and innovation technology effective development applications:

- global experience;
- knowledge; and
- research and investments.

For this task is required to develop:

- innovation and innovation technology policies;
- selection of strategies for innovation and innovation technology;
- realization of the regulations and institutions;
- desire to invest for development and efforts for a job opportunity.

There are diversity instruments of encouragement in innovation and innovation technology applications providing by different international institutions. It is [6, 7]:

- advisory services;
- loans;
- funded programs; and
- business development consultancy.

It creates builds an environment on a global network involvement of innovation and innovation technology practices.

As far it was indicated above innovation can contribute to addressing for creating appropriate environmental challenges through the introduction of new technologies and non-technological innovations for achievement of expected outcomes in business development. The fact is that these indications for instance in non-technological innovations in particular, organization innovation, which is the main aspect of business development are needed to make required technological innovation effective.

The use an innovation can be faced in a large area. For example, evidence shows that innovation in climate change mitigation technologies is accelerating and that in recent years manufacturing companies have also been upgrading their efforts towards sustainable manufacturing,

from introducing pollution prevention to designing integrated approaches that take into account product lifecycles and wider impacts. Definitely, it demands to use advances of technologies traditional and non-traditional oriented to the innovation and innovation technology consideration.

III. INNOVATION AND INNOVATION TECHNOLOGY APPLICATION STAGES

Development of *strategy* of innovation and innovation technology is one of the main stage of the segment of the program as a whole. This innovation and innovation technology strategy program depends of the:

- level of business;
- business environment;
- culture of business services;
- type of business;
- existing law, legislation and regulation; and
- any others related options.

The fact is that all above indications operate based on the following issues:

- innovation and innovation technology with segments:
 - actions for performance in the current stage, point out opportunities for business growing up and marking factors of the success, innovation and innovation technology application for business.

This includes assessment of opportunities and ability of the business to access into;

- innovation and innovation technology;
- markets behavior identification and management tools and instrumentation trends; and
- opportunities to join into the worldwide markets.

It opens an opportunity to comprises of appraising the business environment, including access to key inputs such as capital, labor, infrastructure and technology as well as any other subjects, which is significantly can be influenced to the achievement of innovation and innovation technology application.

There is no doubt that designing and development of the *targeted solutions*, which is the key point of promotion innovation and innovation technology impact, capacity building and outcomes of the business.

Selection a right way mechanism for financing of the innovation and innovation technology has an important place of business environment and consists the following processes:

- seed funding;
- angel and venture investing;
- support the investment-readiness of innovation and innovation technology through development of required facilities and environment for trainings.

It is very important to find out suitable and convenient circumstances to build up capacity and worldwide network for business environment. It has to be embrace:

- accelerators,
- incubators, innovation and innovation technology entities and institutions; and
- state authorities influence which can be reflected as below:

- use different subsidy sources direct or indirect for innovation and innovation technology; and
- finance resources for research and development.

As far as it was mentioned above *strengthening and appropriate state policy design and governance for policy effectiveness* is one of the key point in innovation and innovation technology development.

For achievement an effective outcome in this area it should be impacted such aspects as:

- create an environment for review by state authorities;
- full cover of strategies in innovation and innovation technology;
- expenses spending by public to science, research and technology improvement;
- expenses spending on innovation and innovation technology;
- innovation and innovation technology design as well as development and realization of policy programs; and
- effective and efficient setting up interface between organizational entities for the successful application of innovation and innovation technology policy expectations.

IV. A WIDE SCALE NETWORK REQUIREMENTS

This is the point related to the juridical aspects of innovation and innovation technology cultivation. It is mainly emphasizing of description innovation and innovation technology in private sector policies with improvement of outcomes in health or the environment. It considers to provide learning process in order to aware and share knowledge in innovation and innovation technology [8].

Obviously growth in any economy has a number stages and mainly reflects from:

- growth contribution for production;
- contribution efficiency and effectiveness enhancement through increase of economic activities; and
- innovation and innovation technology application with orientation on a new products development, new technology and facilities use for already existing products, and enhancement of efficiency of contribution applied for innovation and innovation technology.

Based on different information and searching any other available sources giving economic enhancement provides a high difference between developed, countries in transit economy and developing economies depends on innovation and innovation technology performances. Today it is obvious issue that the innovation and innovation technology is vital aspect of economic development and growth. At the same time, for the time being is significantly important in directing major development challenges, which creates environment for sustainable economic circumstances.

Understanding and recognizing importance and necessity of this option, many countries are trying to promote innovation and innovation technology in business development. There is no doubt that the use of advances of technology with approach of innovation and innovation technology aspect is impossible to build up capacity

meeting the modern requirements of the market. It especially appears in case of developing countries as well as in countries with transit economy. The business in any areas needs to consider innovation and innovation technology in order to be able to use a new technology and processes. The success will depend who is ready to consider possible risks, undertake finance subjects, and develop a new products and technological advances process applications to market.

This is not so easy to use innovation and innovation technology in the developing and in the countries with transit economy. There are number obstacles making difficult to apply for. They are:

- human factor (knowledge, education, experience not enough for innovation and innovation technology understanding);
- limited technological facilities;
- adaptation to a new modern technology environment;
- limited working environment and to be ready to adapt to any market changes (mental problems).

However, innovation and innovation technology can be offered selecting geographical area related to the local community performing low- and middle-income which has an important source of innovation and innovation technology as the evidence of development and enhancement of business income and benefits.

It is discovered that by processing accessed information an investment is substantial, but its effectiveness in general is not enough. It has to be increased by enhancement and use of efforts based on continuous contributions.

There are main concerns required to be considered in innovation and innovation technology:

- innovation and innovation technology in organization development issues; and
- approach operation in expected problem solution.

It has to be undertaken in speeding up of the process, make duly execution on an urgent base in order to be able a wider use innovation and innovation technology in:

- coordination,
- consultation, or linkages

One more advantage for human sources is to find out right way of practical solutions. For achievement of expected outcomes is necessary to developed sustainable efforts based on variety of selected mechanisms and created environment for executions. There is one more option is to monitor and assess of system required to control the status of knowledge, share of experience in effectively operation.

V. ENCOURAGEMENT OF INNOVATION AND INNOVATION TECHNOLOGY

The fact is that an income levels are correlating with innovation and innovation technology outputs and inputs. Consequently, on average, innovation and innovation technology presentation is the most forcible in the countries with the high-income comparatively than in middle- and low income. The fact is that mainly in developing countries and countries with transit economy

like Azerbaijan, innovation and innovation technology would be created based on the knowledge and technologies advances of the outsourcing. For instance, outsourcing or any other options in economy, as well as innovation and innovation technology could be developed by use of the local investigation such as scientific research institutions, universities facilitated with research works as well as private sectors.

An enhancement capability of innovation and innovation technology is highly vital segment of countries economic development. It is the way how to grow up the economy of the country based on experience in the innovation and innovation technology. The fact is that development of strategy which can be an important reason of the country economy grow is the key element for achievement of expectations. It makes possible clear understanding of promotion of technology, innovation and innovation technology application. In the other hand is important of engagement of the developed countries to invest of sectors providing opportunities of country economy growing. In general, international financial and appropriate organizations engaged for innovation and innovation technology development takes priorities to encourage in carrying out of innovation and innovation technology.

How to achieve expectations? This is the option needed to be considered in innovation approach of business development. In accordance with this approach, it can be undertaken following steps as:

- create an environment encouraging investment to research activities focused to the achieving high efficiency meeting expectations of customers;
- set up opportunities for local scientific research works and technology developments capable to apply innovation and innovation technology advance with focusing effective use of global knowledge and experience;
- enforce of interface between public research activities and development including private sector users of technology advances and knowledge/experience;
- build up a strong enabling environment, including effective use of information and communications technology; and
- provide flexible financing arrangements to encourage innovative firms to develop new products, processes, and services.

Four types of targeted innovation and innovation technology can be used to encourage innovation and innovation technology [9, 10]:

- encourage opportunities for public and private research activities and development;
- enforce business environmental capacity building;
- look for financial and administration encouragement (consultancy or any other sources) in early-stage of startups;
- speed up of establishment the link between main actors participating in the process of innovation and innovation technology system.

There are variety of ways and mechanisms to execution and support innovation and innovation technology. Competitive research grants are also an opportunity to inforce and enhance performance of public research activities systems, improve links between researchers and industries representatives and open the wide opportunities for promotion of the private sector participation in engagement of the public research activities. The system approach of grant opportunities can be successfully developed for a new products production with collaboration between companies as well as organizations providing research and development to bring innovation and innovation technology to the market.

The finance support and business cost efficiency consultancy are also a vital matter in innovation and innovation technology, which opens opportunity for most effectively to develop variety of business services, works related to the export of the products and continuously use efforts to improve the technology. There is no doubt that encouragement of the frame of business activities and different types of services can be helpful company grow, improvement and bring innovation and innovation technology segment to the market.

VI. CONCLUSIONS

This paper dedicated to the aspects of innovation and innovation technology development mainly oriented in the developing countries and countries in transit economy. It has been described of importance of innovation and innovation technology in business development, influence of innovation and innovation technology in achievement of expectations in business.

An influence to the market of innovation and innovation technology is also studied in this paper. The stages, factors impacting to the business environment are also matter of this paper. An issues of support and encouragement as well as the way of financial and any other related aspects are area of consideration of the paper.

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BIOGRAPHIES



Arif Mamed Hashimov was born in Shahbuz, Nakhchivan, Azerbaijan on September 28, 1949. He is a Professor of Power Engineering (1993); Chief Editor of Scientific Journal of "Power Engineering Problems" from 2000; Director of Institute of Physics of Azerbaijan National Academy of Sciences (Baku, Azerbaijan) from 2002 up to 2009; Academician from 2007; the First Vice-President of Azerbaijan National Academy of Sciences from 2007 up to 2013; and Director of Azerbaijan Research Institute of Energetics and Energy Design from 2014 till now. He is laureate of Azerbaijan State Prize (1978); Honored Scientist of Azerbaijan (2005); Cochairman of International Conferences on "Technical and Physical Problems of Power Engineering" (ICTPE) and Editor in Chief of International Journal on "Technical and Physical Problems of Engineering" (IJTPE). Now he is a High Consultant in "Azerenerji" JSC, Baku, Azerbaijan. His research areas are theory of non-linear electrical Networks with distributed parameters, neutral earthing and ferroresonant processes, alternative energy sources, high voltage physics and techniques, electrical physics. His publications are 300 articles and patents and 5 monographs.



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