

OPPORTUNITIES FOR INNOVATION IN THE INDUSTRY

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ABSTRACT

Innovation is a dramatic and controversial phenomenon that refers to major changes in the contexts of technological advances, new production methods, producing new products or presenting different services with different definitions provided by the experts. The importance of innovation and technological developments has increased in recent as such the organizations have tried to systematize the innovation process to somehow manage the input of technologies and output of industrial growth. Contrary to the past that we witnessed a relatively stable environmental situation and the organizations were sufficed to gradual and minor changes to utilized the emerged opportunities, today, the phenomenon of change is a permanent thing and must be carried out continuously and substantially so that the organizations can adapt themselves to the environment and benefit from domestic and foreign sources to create innovation opportunities.

Keywords: Innovation- Opportunity-industry- global business –technological progress

INTRODUCTION

What makes man different from other beings is his ability to think, reason and power of innovation, and what has revolutionized the human life for thousands of years is the product of these abilities (Motieifar, 2007). The word of innovation means a fresh thing, a new way, changes, and reforms. Its scientific concept includes the presentation of a new product, the application of modern technology and approach in the market environment or the production process (Muradov, 2005). Rather than being an opulent intelligence and personality ingenuity, innovation is a mode of action that requires knowledge, ability, accuracy and purposeful work (Peter F. Drucker, 1999).

Innovation is a continuous activity with no time limit that requires knowledge, expertise, planning, and effort (Rajae, 2008). The need for innovation is due to limitations in place, time, capital, raw materials, manpower, etc. In the present era, only producers who take advantage of innovation in the process of product manufacturing can achieve significant competitive advantages (Fars news, 2011). Thus, the policy makers consider the focus on innovation issue as the requirements of their development plans for successful participation in global competitions.

Definitions of Innovation

Innovation is a dramatic and controversial phenomenon that refers to major changes in the contexts of technological advances, new production methods, producing new products or presenting different services with different definitions provided by the experts.

- According to Varking, innovation is anything revised that is realized and strengthens the position of the organization against competitors and provides a long-term competitive advantage (Shafiee, 2006).
- Mintzberg has defined the innovation as the ability to break old patterns (Ahmadi and Darwish, 2017).
- Holt (1998) has used the term innovation in a broad sense as a process for using relevant knowledge or information to create or introduce new and useful things (Shafiee, 2006).
- Innovation means the commercial production of an idea (Tarek,2009).
- Innovation is the process of transforming an idea into a marketable service or product (Tarek,2009).

What is realized from the definitions above can be explained as follows:

Innovation is a manifested creativity that has been operationalized. In other words, innovation is to provide new products, processes, and services to the market.

Innovation is a process that can turn knowledge into wealth so that its effects can be detected on people's lives.

Reasons for the need for innovation

New technologies are rapidly affecting the human life. This impact is clearly seen in the social and economic aspects of organizations as well. In addition to creating new business markets, recent changes have caused the development of competitive processes and the erosion of monopoly as well so that the organizations will ultimately try to get a better and more precise understanding of new capabilities and needs (Hasani, 2013). The importance of innovation and technological developments has increased in recent as such the organizations have tried to systematize the innovation process to somehow manage the input of technologies and output of industrial growth. This indicates that innovation is a key factor in guaranteeing survival and the first condition for economic growth.

Contrary to the past that we witnessed a relatively stable environmental situation and the organizations were sufficed to gradual and minor changes to utilized the emerged opportunities, today, the phenomenon of change is a permanent thing and must be carried out continuously and substantially so that he organizations can adapt themselves to the environment and benefit from domestic and foreign sources to create innovation opportunities.

In other words, by identifying the problems and opportunities ahead, we need to create innovations in products, services and processes, since due to the changing and unpredictable conditions in the environment (including increasingly complicating technical and technological issues, economic changes and crises, globalization of markets, changes in human biological conditions, increased competition levels, etc.), gradual and minor changes cannot subsequently solve the problems of organizations and enterprises. As a result, only the organizations undergoing fundamental and substantial changes will survive.

Necessity for reinforcing innovative activities in industry sector

In societies with widespread poverty, the governments are obliged to control prices and this situation affects government's general policies in industry sector. The governments take some



indirect measures in developing countries to help industries, mainly aimed at providing infrastructures and expanding the education. For instance, establishing steel industries is supported by government despite being usually unprofitable. However, when budget deficit is encountered, the government does not take such infrastructural actions or carry them out only in limited scale. This declining trend will ultimately leave its impact on industry, and industrial sector will be damaged as well.

Some part of lags in technical texture of industries usually originates from this problem. It must be noted that the foundation of society's industrialization is based on two plans; the first mechanism pertains to how to acquire knowledge and science, and the second mechanism is associated with how to transfer knowledge and science. Although all human societies have had knowledge and sciences by themselves but the two aforementioned mechanisms are important for industrialization of societies. In other statement, industrial and non-industrial cultures have each a specific and different condition in terms of these two mechanisms. The mechanism of knowledge and science acquisition is slow and prolonged in non-industrial culture and these targets are acquired through trial and error (experientially). Knowledge transfer in such societies is also via teacher-and-pupil mechanism, which is again very slow, prolonged and time-consuming. In industrial world, science and knowledge proceed through controlled experiments and library studies and nobody seeks for trial and error in its traditional sense. Regarding education, teacher-and-pupil style is not the fundamental mechanism but instead the education system goes ahead via pre-codified programs. A society will possess a cultural industry if it reaches to the belief that novel mechanisms shall be employed in its scientific-industrial activities. As an example, appointing non-specialized individuals (merely because they are very good people) to managerial positions of some industrial sectors is a non-industrial culture even if they gradually learn the management skills. One might be compelled to appoint such person to a managerial position for some reasons but this selection proves the fact that we are not still living in an industrial society and industrial culture is not currently governing in our society. (Kashani and Rostampour, 2013)

In non-industrial culture, education is not existent in its modern sense. Research investments is more considered as luxurious and pretentious acts, researches and studies are expected to have rapid and instantaneous achievements, wastage of human force is very high in the forms of immigration of specialists and experts to abroad (brain drain) or staying and dissipation of their abilities. Today, we require innovative thinkers in the society. Such people are key players of society's industrial transformations and their number is very limited. Out of a one-million generation who start education since childhood, only few perfectly trained, skilled and innovative forces would remain after passing procedures in elementary and secondary schools, high-school, university and factory. In fact, one generation is lost by missing these individuals. As a result, the impacts are revealed in industries, facing the society with difficulties. This issue is thoroughly perceived in industrial culture and such resource dissipation is not easily permitted. (Salem, 1994)

Economical development essentially signifies transformation of non-industrial culture into industrial culture and this requires the government to fully pay attention to research and educational system. Major economical problems will not be solvable unless researches and innovations are institutionalized in the educational system of country. However, some problems could be solved through short term plans, and for instance, some commodities can be



temporarily imported to the country but principal problems and pitfalls will not be resolved as long as such circumstance is prevailing, unless the time when industrial culture dominates the society and everybody realizes that the society shall move in the direction of having a developmental culture. Thus, fundamental studies should be primarily conducted along with making suitable cultural grounds in order to conduct substantial and proper planning for reaching to economical development. The experience of global economical development is indicative of the fact that industrial culture and industrial development have not been realized in any country without governmental support. No society has developed without effective endorsement of government. Only form of support differs in different societies.

If industries of undeveloped countries are not supported, all demands will be attracted to products of developed countries because all people seek for purchasing better and cheaper goods. In developing countries, there would be no demand for the products since the available technologies often fail to enable suitable production due to low quality level and higher cost of commodities. Foreign goods are imported to the country under such circumstances, and if all required amount cannot be supplied from imports, the government will resort to domestic industry to produce the remaining demand at lower qualities. Also, in the latter case, the grounds are provided for further dependence of country's economy; this dependence includes both foreign exchange and raw material requirements.

Of course, it is vivid that governmental support shall be accompanied with terms and conditions. In other words, the government has to take steps in a direction that provides the conditions for industrial transformation regarding technology and human force so that certain industries can become independent economically. And also, the government should not allow the industries and production structure to deteriorate in an unreasonable competition. It means that many of these industrial units will shut down and change their businesses to other trades if not supported by government. This support shall continue to the extent that levels of society's science, technology and industrial culture are modified. Yet, the economy shall not be left alone unless the time that such developments are achieved. Technological advance currently is so greatly remarkable that countries like Japan are not thinking of constructing factories anymore, but instead, are planning to export "thoughts and ideas". They intend to pass the work in factories to robots or labor forces from other countries where the needed scientific and technical developments have not yet been achieved. They are looking for the goal to deal more with intellectual activities and export their thoughts and ideas. However, the issues are different in developing world. In these countries, if a factory can be inaugurated, the involved people will celebrate because they have been able to create jobs. Therefore, if the government does not support domestic production, it will not be possible for the industry to flourish in the country. And as long as this process resumes, it will be very unlikely to make investment in industries because every rational man would prefer selling parts instead of investing in production of parts. Accordingly, reaching to these supports requires transformation in government's macro-policies.

Creating innovation opportunities

In view of the economists innovation has been always taken in account as an important component in path of development of human being life and welfare. Regarding limitation in the



sources, innovation is the most appropriate and effective method for optimum use of the facilities and achievement to more suitable economic growth.

J. Schumpeter writes about innovation as the driving force for economical development. In his viewpoint, launching a new product equals to introduction of a new method in the relevant process of production, openness of a new market, derivation of new sources and establishment of new arrangements in the related industry, etc... that is operated by entrepreneurs. Success in innovation results from a comprehensive understanding needs and favorites the customers, partners, employees and other people that are related to the industry. The main principals of innovation include attraction trust of others, direct interaction with the customers, investigation of the international evolutions and obtaining the solutions that solves the human's real problems. The most significant incentive for continuance of movement to innovation include following competitive advantages. Merely based on dependence on the improvement of current products and services, any country can remain in situation a profitable economy because the new competitors are emerged. Also, companies must introduce new methods and create completely different products rather than conducting old approaches. Although effectiveness of activities is necessary, that is not enough; effectiveness in activities does not guaranty taking over other competitors.

There are various resources to create innovation opportunities in organizations and industries. Creating an idea requires a large number of different sources, both internal and external. Such resources for an industry include: (Peter F. Drucker, 1999)

1. Internal resources to create opportunities for innovation

A. Unexpected events

Unexpected events, including unexpected opportunities or threats, are important resources for innovation opportunities. Discovering an unexpected situation or the emergence of unexpected failures to be exploited can serve as an important source for creating innovation opportunities. But since the managers generally ignore unpredictable possibilities, they often have a negative attitude toward unexpected events so that the managers in such organizations always lose the unexpected events.

B. Inconsistencies

Inconsistencies, including inconsistency in the logical process of a process, the inconsistency between economic facts, inconsistency between expectations and results, etc., can also act as a source of innovation opportunities. For example, when an industry benefits from steady growth in the market while suffering from a decreasing ultimate profit, the situation indicates an inconsistency between the economic realities. For instance, these types of inconsistencies can be found in the steel industries in developed countries between the '50s and' 70s, where the innovative response was to "make factories smaller", through which methodology change, they achieved a good economic growth.

C. Process requirements

Process requirements are also seen as major resources for creating innovation opportunities. For example, by installing reflectors on old Japanese roads (which did not fit modern highway systems), each car driver could see other cars in all six directions. This small innovation, which reduced the traffic load and increased road safety, results from a process need.

D. Industry and market changes



Some believe that industrial structures are irreplaceable. But these structures change as well, and this change creates many opportunities for innovation. When an industry grows rapidly, its structure also changes. In these circumstances, successful companies, meanwhile defending the achievements gained so far, will identify new opportunities and use them for service provision. For example, the emergence of cosmetic surgery and psychiatric clinics and so on are as such .

2. External resources to create opportunities for innovation

To increase the likelihood of creating new ideas, it is necessary to go beyond the framework of the company and develop a strong stream of ideas exchange with customers, suppliers, post-sales service units, research institutes, industrial associations, etc. In summary, opportunities sources are also created outside the company and within social and intellectual settings, which include:

A. Changes in the population characteristics

Future events are largely dependent on demographic events, and changes in the characteristics of the population appear to be as the most prestigious external resources to create the opportunity for innovation. Simply put, demographic changes in terms of the population number and, consequently, the distribution of age, level of education, amount of wealth, job type and their geographical location are among the most important factors that can change the needs of individuals. Forecasting and identifying such needs will lead to a maximized outcome and a minimized risk on the way to entrepreneurship.

B. Change in attitudes

Attitude shows the organization's worldview; thus, the humans' behaviors originate from their attitudes. New beliefs and attitudes may change the people's behavior, the organizational culture, and can change the needs, which determines how the organization will deal with the surrounding issues. Identifying these factors can be a special opportunity for creating ideas and innovation. (Iranzadeh, 2007)

C. New knowledge

New knowledge brings some technologies by itself. Affecting the content of businesses, these technologies affect the organizations and ultimately cause changes in staff and personnel. However, the use of new technologies requires new information that accessing to such information would change the behavior and type of communication of individuals. Therefore, the new knowledge can be also considered as an important source for creating innovation opportunities.

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