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Integrated Approach to Entrepreneurship – Knowledge based Economy: A Conceptual Model

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Abstract

Today entrepreneurship as one of the basic resources to produce wealth and as a kind of stimulus for development in the world, has led to productivity and economic growth. On the other hand, Knowledge-Based Economy(KBE) relied on manufacturing, distribution and application of knowledge and information and try to exploit the knowledge for economic development, organization policies and international agencies. So the necessity of combining these two concepts to increase the efficiency and utilization of human resources and extensive knowledge simultaneously, in order to advance the major organizations goals will be felt more than ever. In this paper while addressing the topics of entrepreneurship, knowledge-based economy is defined and its prerequisites and consequences have been enumerated. The success criteria and the key role of knowledge in this new economy have been gathered from various sources. Then a conceptual-compiling model, derived from various aspects in development and growth of knowledge-based economy and entrepreneurship has been presented. This new model is called the knowledge-based entrepreneurship emphasizing on the synergy of these two concepts in order to achieve competitive advantages such as high efficiency, optimal use of knowledge and human capital, and making fundamental changes in the entrepreneurial organization.

Keywords: Entrepreneurship, Knowledge-based economy, Sustainable development, Knowledge-based entrepreneurship

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1. Introduction

Today with the emergence of knowledge as one of the factors of production, creating a great impact on internal organization resources and leading to competitive advantage among organizations. In fact, the important feature of knowledge is that, it is not like other public goods that using one, stop other people using that service. But what is rare is the ability to use knowledge in ways that ensure growth and economic development.

In the information society in which knowledge is the most valuable wealth, the most important element in providing value-added is converting knowledge to ability. There are so many economies that use knowledge, but few of them are regarded as knowledge-based. In fact the economies which are directly based on production, distribution and use of information and knowledge, are called Knowledge-Based Economies (KBE) [1].

Since the knowledge-based economy is an economy in which production and distribution of knowledge play an important role in wealth creation, in such economy, the goal is not only advancing knowledge, but also promoting the efficient use of knowledge in all economic activities. As a result, knowledge-based economy with a view that creating value must be considered as the most important determinant of living standards and creating new jobs in the twenty-first century, It was taken into increasing consideration and support by the private sector, government and academia in the 1990s[2].

On the other hand, entrepreneurs would be leaders in the next world economy decade and entrepreneur in knowledge-based economy would be a critical issue and this has been confirmed by various experts for many times.

In short, entrepreneurship is a managing process, that gives individuals the chance to use the opportunities continually and offers new ideas and employs them[3]. In fact, entrepreneurship can be called a dynamic process which includes vision, transformation, change and creativity.

Most experts define the entrepreneurial as a process of hunting opportunities by people (individually or in organizations), without considering the resources available to them[4].

Entrepreneurship in the economy is severely searching for observing issues related to innovation and knowledge [5]. Hitt et al(2001) believe that in entrepreneurship the existing compound products are developed in new methods, new products are commercialized or launched to new markets and new services are provided for customers[6].

Also today Information and Communication Technology(ICT) providing the breadth and diversity of services available to the world has influenced the field of entrepreneurship. In fact, Entrepreneurship today is highly dependent on technology platforms, and takes many advantages of them.

In addition, many researchers have emphasized the importance of entrepreneurship in creating wealth and development of society and companies[7]. In other words we can say, entrepreneurship has major and special role in the development of new technologies such as information technology, although these technologies have influenced on entrepreneurship and created the modern entrepreneurship.

2. Entrepreneurship

In recent years many companies which want to stay in the fast-moving world of today, consider entrepreneurship as a behavioral and functional requirement. This phenomenon with the ability to create change in society, can create new job opportunities[8]. Historical review of entrepreneurship literature suggests that this term, was brought up for the first time in economic theories, and then sent to schools and theories of entrepreneurship in the other humanistic fields[9]. Now entrepreneurship, one of the main economic motor power of any modern society, is considered as a tool to face the new competitive landscape and more rapid changes[10].

Entrepreneurship is renewal of strategies and transformation in organization[11], entering new markets[12], and dynamic process for creating wealth increasing[8]. According to

Kuratko(2009), entrepreneurship is a dynamic process of mission, change and creation [13]. According to these theoretical bases, entrepreneurial is a combination of opportunities in areas where they are located, the personal characteristics necessary to identify and pursue these opportunities and to create specific results[14]. Through research and investigation it is concluded that the productive activities of entrepreneurship are the main sources of economic growth [15].

Environmental uncertainty, disturbance, and heterogeneity for today's organizations create a group of strategic challenges. The great increase of competition in domestic and global markets has revealed the important role of entrepreneurship in the development for businesses. So, organizations in order to face the development challenge and raise the core competencies, are increasingly rely on effective use of organizational entrepreneurship. Organizational entrepreneurship is the Effort to improve the competitive advantage of organization through making the innovations internal that create the new industries.

It should be said, the main purpose of organizational entrepreneurship is crating dynamic, competitive, flexible organizational structure and culture to deal with competitive and dynamic markets. In fact, organizational entrepreneurship, is an effort to promote the innovation of an internal organized view through assessment of the new opportunities, arranging resources, and commercializing organizational opportunities.

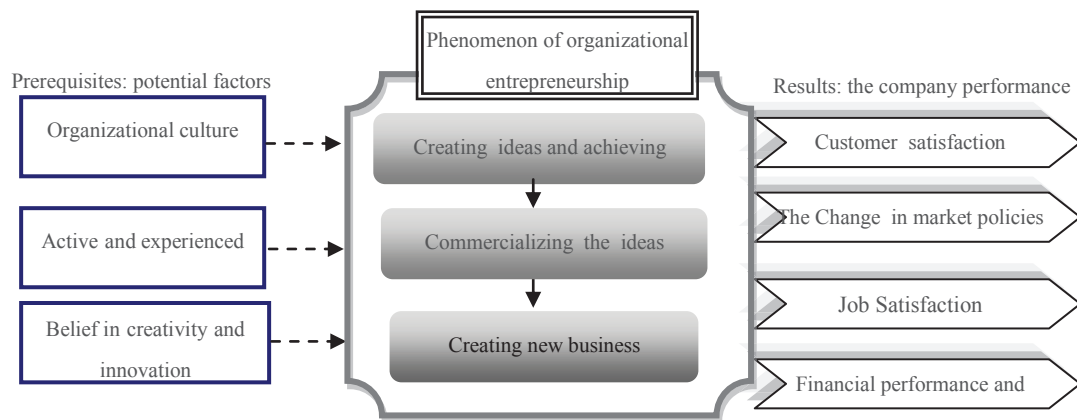


Figure 1. Prerequisites, processes and Results of organizational entrepreneurship

3. Knowledge-based economy

In recent years, knowledge-based economy has become a very conventional subject in economic development and public policy[16].Schumpeter's like Hirschman, Galbraith and Godwin had special attention to the role of creation and innovation in dynamic economy, and Romer & Grossman by presenting a new theory of human investment supply, consider a great role for science in long-term economic growth[16].

We can say the knowledge-based economy is based on manufacturing, distribution and application of knowledge and has special attention to knowledge-based industries and investment in knowledge. This kind of investment is the total cost of the research and the development of high education and software. In other words, investing in knowledge means the cost of activities that leads to promotion and acquisition of new knowledge.

Asia-Pacific Economic Cooperation(APEC) defines knowledge-based economy that an economy in which production, distribution and application of knowledge, are the main driving factors for economic growth, generating wealth and employment in all industries. Some rich countries members of Organization for Economic Co-operation and Development(OECD) because of their success in

generating knowledge, And the role that knowledge plays in their economic growth, their economies has been called knowledge-based economies[17].

According to Landvall (2000),in the new economy the main attention would be paid to creating knowledge, new products and services not to allocating available sources ,therefore it would be irrational for individuals and businesses if they apply their intellectual capacity to re-allocate resources because they can use their intellectual capacity to create new ideas[18].Unlike the traditional economy in the knowledge-based economy, investment and technology raise each other value reciprocally. Technology can promote the return of investment to the extent that ability of labor and material resources are not able to increase it.

Enormous environment of Knowledge-based economy should be in a way that causes encouragement and growth of investment, because innovation as the main factor of sustaining a knowledge-based economy requires investment in marketing, new equipment and tools, growth and development of products that improve productivity and profitability[19].

There are various methods for measuring the knowledge-based economy, but there are at least three common methods for this purpose: APEC method, OECD method & World Bank method(KAM).Knowledge Assessment Methodology(KAM) is a complete method which in addition to all the variables, provides the ability of comparison and ranking more than 140 countries. Table 1 shows the status of knowledge-based economy in Iran (ranked 98) in comparison with Turkey (ranked 61) based on the methodology (KAM) in 2009.

Table1.the status of knowledge-based economy in Iran in compare with Turkey

Index	KEI(knowledge Economy Index)	KI(Knowledge Index)	Economic Incentive Regime	Education	Innovation	ICT
Iran	3.75	4.67	0.99	3.8	4.56	5.65
Turkey	5.55	5.07	6.98	4.46	5.83	4.92

According to Table 1, to study the status of Iran in the field of indexes of knowledge-based economy, including the internet and telecommunication systems, electronic banking systems, human development index, the status of research and development (R & D) show that Iran is in the rank of lower middle class in the knowledge-based economy, Although the status of Iran in the field of many indexes like human development and educated labor force has improved considerably. Denmark is the first country with an index value of 9.52 and also Sweden and Finland are respectively in the second and third place[20].

On the other hand, the industry in knowledge-based economy is heavily dependent on knowledge, research and development. In this type of economy, cheap labor is not an advantage, but the specialist's labors with high adaptability to the environment, creative and constantly learning is very important. Also for an economy to be knowledge-based it is believed that there are many criteria which the authors have collected and are mentioned below:

- The amount of investment in research and development (R & D) and percentage of R & D expenses to total expenses
- The portion of cost of R & D institutions of higher education to GDP
- The costs of innovation to total business costs
- Percentage of companies that produce technology products
- The portion of exports of the goods with high technology on the total GDP and its portion to total exports
- The number of technical and scientific papers published in prestigious publications per million
- The amount of the investments made for ICT equipment
- Percentage of the total ICT workforce professionals to total work force
- The number of ICT and internet servers and lines that are available for them

- The rate of use of the internet with high bandwidth
- The rate of ICT penetration in the business sector and government organizations
- The portion of e-commerce
- Percent of companies that use internet to sell their goods

3.1. Conceptual model

As mentioned, business environment by becoming competitive, organizational entrepreneurship has become a strategic issue and to achieve this goal, organizations are required to identify opportunities, generate ideas, identify resources and plan to achieve them in order to use that idea. As in knowledge-based economy the most focus is on knowledge creation, new products and services and organizations using their intellectual capacity to create new ideas. Also creation of new ideas is important for organizational entrepreneurship. So In this section we present a new conceptual model. It is shown in Figure 2.

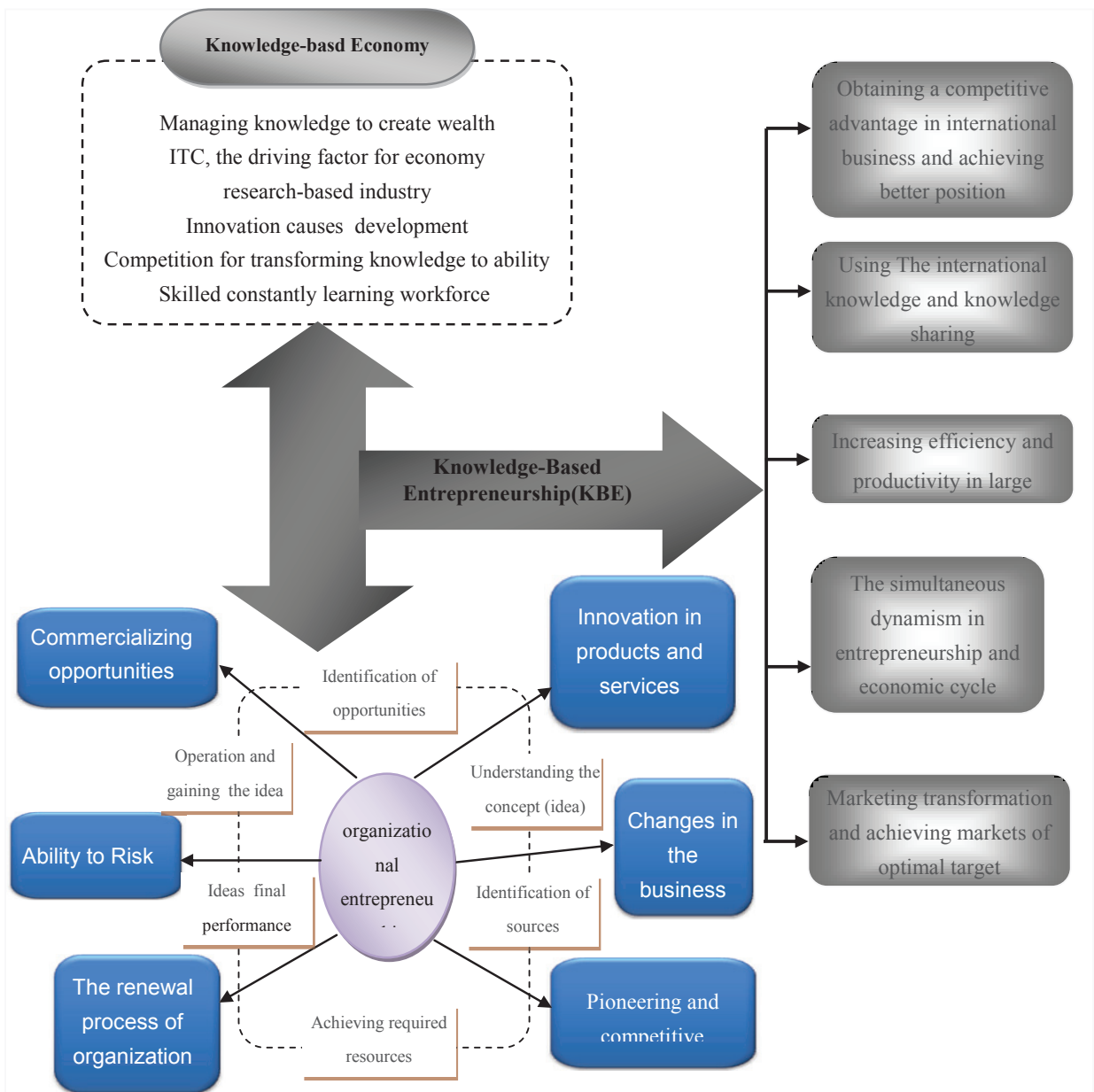


Figure 2. A Conceptual model of Knowledge-Based Entrepreneurship(KBE)

A new conceptual model which is presented in this section, its core is that of the entrepreneurial cycle model of Morris & Kuratko (2001). It is started from identification of opportunities in organization until the productivity of ideas and innovation. At this level entrepreneurship is formed. Dynamism of an organization depends on continuation of its cycle by the continuation of this cycle, entrepreneurship organization achieves some abilities like "business transformation", "leadership and competition" and "ability to risk; But according to turmoil competitive environment, it does not guarantee the company's success by itself. And with regard to what is mentioned in figure 2, in addition to dynamism and innovation, financial and economic issues should be considered. An economy which can compete with other powerful companies and is composed of entirely new components. Because if the profitability aspect is ignored, not after a long-time the organization would face serious challenges between the competitors and gradually would be removed from the entrepreneurs and organizations due to not having favorable economic turnaround.

So the knowledge-based economy has completely up to date and competitive parameters in the international trade environment considering that it has some features in common with the organizational entrepreneurship, can be as a complement, reinforcement, and catalyst in achieving the goals of proposed entrepreneur organizations and leading to synergy and overlapping between these two concepts. For example, knowledge-based economy with the ability to risk which is one of the characteristics of corporate entrepreneurship, can appear to be agile in the field of international trade. Or although innovation is the major factor in sustaining a knowledge-based economy, organizational entrepreneurship is also heavily involved in product innovation and service. Also the industry in knowledge-based economy, heavily dependent on knowledge, research and development and organizational entrepreneurship with effective use of knowledge and research can achieve lean ideas.

Better sense, if the entrepreneurial organization with its capabilities and advantages use knowledge, ICT and human capital dynamic, learner which are the key components of a knowledge-based economy, and have the idea of innovation and transforming gained knowledge from the entrepreneurship to ability then would be able to reach a completely new approach called "knowledge-based entrepreneurial with unique features and capabilities. This approach in addition to make organizations establish correct solutions in business with entrepreneurs. It guarantees their existence in the harsh way of international competitive environment by the help of the concepts of knowledge-based economy.

According to the proposed issues, if organizations management can perform practically the parameters and capabilities of these two concepts, we can say that "knowledge-based entrepreneurship" has been institutionalized in the organization and can archive very strategic benefits, including "transformation in marketing and achieving optimal target markets", "using inventory of international knowledge and knowledge sharing" and "simultaneous dynamism in entrepreneurship and economic cycle". However, once these goals are very useful but are not accessible at once. In fact, organizations with long-term, systematic and targeted plans can achieve these goals.

4. Conclusions

Move towards knowledge-based economy, would create new opportunities for the country's economy. The ability of using existing international knowledge is the most important opportunity that, knowledge-based economy provides for a country and it means the increase of efficiency and productivity. Pure attention to university and technology cannot bring the knowledge-based economy, but with a broad and large vision it is possible to use all aspects of the planned economy and also the universal development of knowledge can make this way smoother to evaluate the needs of entrepreneurial activity.

And also in the knowledge-based economy, cheap labor is not an advantage, but the existence of professional with high adaptability, creativity and constantly learning is very important factor. On the other hand, transformation of business in organizational entrepreneurial process without creative

professionals that can be immediately synchronized with the environment is not possible and destroys the possibility of being a pioneer.

In previous views on entrepreneurship the issues about economic profitability were less considered. While in this paper by integrating the same concepts of entrepreneurship and knowledge-based economy, the conceptual model has been presented and If organizations would be able to perform these two important concepts completely, in addition to changes in organizational culture, The organization would be placed in the path of sustainable development. Also, by applying experienced human resources and the creation of pure ideas, the organizations opportunities would be commercialized.. Other useful benefits are: development and growth of technology, innovation in organizations processes, and dynamism in facing competitive markets.

At the end of the article it is essential to mention that the role of ITC as a driving factor in knowledge-based economy is an issue that the organizations should completely consider its conditions to be leadership and competitiveness in international environment which result in creation of the new opportunities in the field of organizational entrepreneurship.

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