Journal of Advances in Medical Education
Vol.1, No.4, April, Spring, 2019

Investigating the need to implement a knowledge-based economy and its solutions in the country - focusing on Iranian higher education institutions

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Abstract

The knowledge-based economy is the economy of the third millennium. A knowledge-based economy is one that effectively creates, acquires, adapts, and applies knowledge for economic and social development. In this type of economy, knowledge as the most important source of learning is its most important process. Also, a knowledge-based economy is an economy in which the production, distribution, and use of knowledge has a major role to generate wealth. Our country has entered the field of research in the field of the knowledge-based economy, but there is a need for planning in this field according to the strengths and weaknesses of the country. The purpose of this article is to emphasize the importance of knowledge-based economics, which at this time is characterized by rapid change and sometimes radical change. The development of this economy is impossible without the adaptation of both the people and the organizations. In this article, we develop the concept of the knowledge-based economy, elements, definition of the knowledge-based economy, stages, and formulation of basic knowledge. Therefore, in this article, we intend to «study the need to implement knowledge-based economy and its solutions in Iranian higher education institutions» and finally to provide the importance of knowledge economy and useful suggestions and solutions in this area for the country and higher education institutions.

Keywords: knowledge, knowledge-based economy, knowledge-based organization, higher education institutions (universities)

Introduction:

The term «knowledge-based economics» has been introduced to describe some of the major developments in industrial societies in the late twentieth and early twenty-first centuries. Some commentators believe that the term is in fact an exaggeration. («If something is going on, it is more a matter of evolution than of revolutionary developments.») Some commentators are still more critical and misleading the term. («All human societies have relied on knowledge and information: to establish oneself as knowledge-based means to weaken the ability of previous societies and / or to privilege certain types of knowledge and information that our economy prioritizes.»). Despite of this power and criticism, this term has its uses (1).

Today, knowledge and information are recognized as determining factors in the position and competitiveness of organizations. With the increasing emphasis of the government on creating a knowledge-based society and prioritizing the move towards knowledge-based economies (KBEs) in the Fourth Development Plan, an important issue is understanding how knowledge can be used as an important competitive resource (2). Many organizations, meanwhile, have focused their efforts on how knowledge can be managed in the organization. KBE has many benefits for organizations, including improving the quality of work, having up-to-date information, increasing the ability to respond to the needs of other organizations, and the possibility of rapid change and adaptability (3). Information and communication technology topics play an important role not only in automating tasks within the organization, but also in providing the infrastructure to facilitate communication across organizational boundaries, implementing one-to-one marketing strategies, and managing business relationship and paying attention to it in e-commerce and marketing has become one of the topics of interest in the global economy (4).

This attention, known as the «KBE», has added to the importance of the issue. The use of IT, ICT in business and marketing has been necessary in economic development for various reasons, because technologies such as computers and the Internet have become silent partners for traders and manufacturers, which in addition to performing calculations in decisions also helps to cover current and overhead costs. Minimize business (5). KBE is one of the topics that become popular in recent years, and this highlights the need for more research to find new solutions in this area. This issue has been raised as one of the most important issues of the economy today and is a fundamental concern of underdeveloped or developing countries; Because such countries know that with the slightest shortcoming in this field, they will soon and completely withdraw from the world trade arena, and they will give the same small interest to the industrialized countries that have taken steps in line with this new issue. Since KBE is a competitive advantage and a factor in the growth and development of current organizations in dynamic and changing environments (6), the need to address this issue and work on In order to make it as effective as possible to achieve the goals of the country and the country›s higher education institutions are determined.

Subject literature

At the 39th Annual Meeting of the Asian Development Bank (ADB) in 2006, a seminar on KBEs was held. The key message of the speakers was that developing countries that are unable to effectively convert their economic systems into KBEs will give the same small portion to industrialized countries, and the differences between developing and developed economies is increased. To succeed in this increasingly competitive and globalized economy, countries need to have an advanced information and infrastructure, communication technologies, a highly educated workforce, innovation programs and research, a dynamic and supportive monitoring environment. ADB and its stakeholders need to understand the elements of the global knowledge economy and develop better ways to help local Asian countries become emerging KBEs actors (7). Today, the world economy is rapidly transitioning from knowledge-based, and knowledge support is a vital factor for economic growth. The recent trend of globalization has caused all continents, regions or countries to be actively involved in the global economy so that competition is the main factor of progress. Knowledge-based economies provide an environment in which competition is critical. The Organization for Economic Co-operation and Development (OECD) also defines the KBE as «an economy that is directly based on the production, distribution and use of knowledge and information» (8) (9). Thus, it shows that the production and exploitation of knowledge plays a major role in wealth creation in KBE. New growth theories have shown that knowledge-based economics is an important factor in production, taking into account the unique features of information and the ability to transfer it from the user without losing its usefulness. Investing in equipment new embodiments of technology and education, inventions and activities related to knowledge enhancement are all factors that increase capital as human capital. Advances in technology make it possible to extract more value from limited resources to sustain economic growth. (10).

Thus, KBEs today are making efforts to improve productivity at the economy level by increasing total factor productivity. Studies in industry performance analysis show that knowledge-seeking industries demand many times more value-added, and much more productivity than traditional or non-traditional industries (11). Knowledge-based economics is often described as a way for society to transform in order to achieve sustainable economic growth and solve various climate challenges due to increasing resource scarcity. Countries face constant changes in scientific and technological development, but there are also new developments in trade. Each member of this global economy has to adapt to these rapid changes. Based on the available opportunities, countries intend to increase their growth rate. Resources are a way to achieve growth, but they can also be used to meet the needs of future generations, as resources are scarce. The trend of sustainable development in most countries today is well in line with the trend of improving the knowledge economy. To achieve the necessary improvements, the two systems must be coordinated (12) (13). Knowledge-based economics, in addition to being a modern scientific term, is a new era of economic development and is deeply different from the era of agricultural and production economics. Although this emerged in the early 1990s, it has affected all areas of economic and social life, and this effect is constantly increasing (14). The development of the knowledge economy will be the beginning of a new phase in the growth of the global economy. However, measuring and scaling the concept of knowledge is generally complex and difficult. Therefore, our understanding of KBE is possible by measuring the quantity and quality of available indicators related to knowledge. In fact, no one else can absolutely assume that the available information can answer the relevant questions accurately. Therefore, since KBE observations and indicators are knowledge-based, KBE may remain a vague concept without measurable definitions or

effective classification of indicators. Therefore, there is an urgent need to measure and classify the indicators of the knowledge economy in a more effective way. In other words, improving the actions or classification of methods for KBE helps a lot in understanding its dynamics and adopting more effective policies.

The structure of knowledge-based economy

A new area that is currently inspiring the theoretical field of economics is the transformation of the traditional production and service economy into «KBE». To the extent that this issue extends to economies with natural resources (such as Iran, Saudi Arabia, etc.) that are interested in diversifying resources and economic bases and getting rid of dependence on specific and individual resources (such as oil and gas) are. This marks the beginning of a global movement towards building a knowledge-based economic base. However, there are various obstacles in this direction, such as the adherence of the current educational, administrative and social system to existing methods and resistance to change. In general, the question is how to reduce this resistance by employing motivated and skilled people and pave the way for achieving the goals of the knowledge-based economy. The quality of education is certainly at the heart of such a development, as the theoretical literature on economic development has repeatedly emphasized the vital importance of «human capital» in economics. Therefore, many countries in the Persian Gulf (Saudi Arabia, Iran, etc.) focused on improving their higher education sector, believing that they can use it as a powerful lever in the development of knowledge economy and increase productivity at the level of Provide national. With the development of higher education, other aspects of a country›s living standards and ability to compete in today›s global economy will in turn grow and strengthen. Quality education encourages improvement in all sectors of the economy, as it encourages a skilled and higher-level workforce to use new technology and increase productivity. Finally, the ability of any society to produce, select, adapt, and commercialize knowledge is critical to sustainable economic growth and improved living standards. Limited resource countries such as Singapore, Malaysia, South Korea, and even Taiwan have developed more patents than other oil related and rich resource economies, as they have found that economic growth is one way to Capital accumulation is more of a knowledge accumulation process. Thus, some developing countries and some developed countries such as Finland, Switzerland and Sweden spend most of their investment costs on knowledge-based intangible assets such as education, research and development, patents, and exports. . Licensed and designed. Their strategic goal is simple: to gain a more competitive advantage in the global economy. Saudi Arabia is working hard to diversify its economic base to ensure confidence and be less dependent on one commodity, oil. Expenditure on education and reform in this sector has increasingly become a central political policy in Saudi Arabia›s development plans and expenditure forecasts, and a huge amount from the Ninth Five-Year Development Plan. Human resources are allocated. New public and private universities have been developed, as well as world-class universities, including King Abdullah University of Science and Technology (KAUST). For Saudi Arabia, education plays an important role in the unity of the nation and the promotion of social cohesion, trust in social institutions, national participation and the appreciation of diversity. However, despite such commendable goals and high costs in the education sector, there is still an imbalance between the quality and quantity of professional expertise produced by the Saudi education system versus the job structure required by the economy for employment opportunities. There is a present and a future, especially the growing shortage of technical and scientific graduates to meet the demands of large oil pipeline development projects. At the same time, the education sector in general, not only at the graduate level, is increasingly challenged by the rapid pace of scientific and technological progress, and therefore needs to constantly review the curriculum to adapt to the latest

application in practice is very time-consuming. Because it requires a paradigm shift in teaching and learning methods. According to World Bank studies, there are four complementary roles of strategic dimensions that can lead countries in the transition to a KBE: (1) an appropriate economic and organizational system, (2) a strong human capital base, (3) Dynamic information infrastructures and (4) an efficient national innovation system. Saudi Arabia has taken steps on all four fronts, but not all dimensions of progress have been the same. Still, despite building a stronger and more dramatic human capital base, and creating a culture and system of national innovation, it still lags behind other developed countries in these areas. The country has evolved by trying to offer a combination of strategies, including the establishment of world-class universities such as KAUST, and the empowerment and upgrading of existing universities with potential for excellence. In general, these actions are exciting and challenging for Saudi Arabia, which has an explicit commitment to be part of the global knowledge-based economy, despite all its difficulties and obstacles (15). According to the mentioned topics, our country can also be more considering the efforts of countries with natural resources such as Saudi Arabia or with limited natural resources such as Singapore, Malaysia, South Korea and Taiwan, and developed countries such as Finland, Switzerland and Sweden. Allocate your investment costs to knowledge-based intangible assets such as education, research and development, inventions, licensing and design in collaboration with universities and higher education and industry centers to receive knowledge to help economic growth Conversely, the knowledge-driven economy always leads to innovation and technical change, and it can be acknowledged that the country is entering a two-way and improving cycle, as shown in Figure 1.

Figure -1 The relationship between academia and industry and its impact on economic growth

The four pillars of a knowledge-based economy

1- Training and skilled labor

To do this, we need a new program that is based on the use of new knowledge with existing information. In fact, there should be an incentive system for labor training that provides efficient and effective use of new knowledge along with existing information. This policy provides good economic institutions that enable efficient and efficient labor mobilization and resource allocation (16).

KBE is changing the demands of the labor market around the world (17) This is true for both new and old industries that need more creative and innovative staff, since That they are trying to move up the value chain. Emerging ICT-related industries are also in high demand for highly skilled and adaptable personnel. In both manufacturing and services, the need for skilled personnel is increasing, and in all scenarios the demand for low-skilled personnel is declining (18). While the need to invest in education is widely acknowledged, it must be acknowledged that such investment must be aligned with technology policies to ensure that returns to scale will also be achieved. (19). The link between education and technology needs to be strengthened through appropriate technologies and responsive policies and the development of innovative and research-oriented educational institutions (20)

2- National innovation system

The National Innovation System (NIS) is «a subsystem of the national economy in which different organizations and institutions interact and influence each other in carrying out innovative activities» (21). NIS provides a more comprehensive view of a country›s innovation system, including embedded learning processes, incentive mechanisms, and interactions and relationships between the various actors involved in the innovation process (22).

The concept of NIS recognizes the fact that innovation and advancement in technical capacity is the result of a set of relationships between actors creating, acquiring, disseminating and applying different types of knowledge. The main actors include private institutions, universities and government research institutes, intermediaries such as technology parks and regions, and related financial institutions. The basic premise of innovation systems is that if these actors are not linked, innovation cannot occur and therefore do not communicate with each other (23). Through these systems of innovation, structural capital is further developed in the form of new systems, processes and technologies.

Liu and White (2000) identified five key activities of innovation systems. These systems, because they consider both research inputs and outputs, extend beyond a simple R&D system:

• Conducting research that may include basic, developmental, or engineering research;
• Practical implementation of research in the actual production and manufacture of a product or service;
• Identify end users and customers of product or process outputs;
• The link or process of gathering complementary knowledge; And
• Required training and learning processes (24).

3- Building networks

The modern economy is characterized by a complex interaction of competition and cooperation between economic actors. The contribution of competition is important in achieving economic efficiency and productivity. Some of the key growth factors in KBEs are involved in the acquisition of new and emerging technologies. This requires the production and adoption of new scientific knowledge and technologies, pursuing the required innovation and human resource development. It also requires extensive collaboration and networking with relevant parties across the region and the world (19).

Building networks, whether ICT-driven or built on social trust through traditional face-to-face interaction, is one of the most important tasks in moving towards a knowledge-based economy and community. ICT infrastructure and social trust are essential elements for the development of national stakeholder capital. Many of KBE›s features have been shaped and enhanced by the rapid development and growing use of ICT. ICT provides the acquisition, acquisition, storage, dissemination and effective use of domestic and foreign knowledge globally. This is due to the capacity of ICT to support the development of networks, and to establish and maintain relationships between individuals, groups, and organizations that have knowledge that has an important and valuable application for others. Indeed, the importance of ICT in supporting Knowledge-Based Development (KBD) lies in its capacity for efficient networking, connectivity, interdependence and coordination. While physical infrastructure is very important in the industrial age, information infrastructure is essential in the age of knowledge (25).

Social and business networks are common in Asian countries, and these networks are an advantage in doing business. Chaebols networks in the Republic of Korea, keiretsus in Japan, and guanxi in Chinese business communities, with their advantages and disadvantages, have been institutionalized forms of stakeholder capital. The Musyawarah Advisory and the mufakat consensus are the Malay practices adopted at the meetings of the Association of Southeast Asian Nations that can be seen as a service to build stakeholder capital. Building relationships is important in Asian cultures because they invest in relationships for business, personal activities or other purposes. The unexpected and rapid growth of the SMS system or the sending of messages via mobile phones in the Philippines can be attributed to the value that Filipinos attach to relationships. Networking in Asia is probably a business and social arena where we will see how technology and culture are reinforced together (26).

4- Setting regulatory policies and environments The role of Asian decision-makers in moving their nations toward KBE / KBD varies, but the overall pattern includes the following three areas:

- Policy: Law, Organization /Reorganization and Regulations
- Planning: Develop a vision, strategy and roadmap
- Infrastructure and Plans: Create and implement the required physical, organizational, and social infrastructure and plans, including pilot projects in the three areas of Human Resource Development, Infrastructure / Institutions ICT and the development of science and technology or innovation system. This area was examined in paragraphs 1 and 3 above (27) (26).

Stages of knowledge development

Knowledge-based organizations are simpler and more flexible, require fewer levels of management, and the flexibility and information provided by this new functional structure allows the company to better protect against risk. This does not mean that achieving the desired performance will become a simple process. Knowledge-based organizations will not be able to achieve the desired performance without the right approach to knowledge, and the development of a new system, and it is often argued that these organizations are difficult to implement. The process of adapting to the new model of knowledge-based organization can not be done directly, but only using the six dynamic steps mentioned in Table 1: the need to re-evaluate and rebuild the whole system before change it is very important. During the first stage, the feasibility of the next stages is presented, a correct basis of knowledge-based development is followed according to the principles of the new concept in the development of the organization. Each stage will provide a consolidation of the previous stage - possible mistakes in a higher stage will have a bad effect on the company›s performance, and also achieving the goals of the initial preparation stage will have a better effect on the performance achieved in the final stages. That is why periodic and accurate evaluation is required to seek prompt correction in every aspect of contact with the organization. Teamwork is highly recommended, the development of «think tanks» may lead to better performance. “ Path” Development stages by improving knowledge within the organization are shown in Table 1 28)). In addition to the above, measures and indicators are needed to examine the extent to which the knowledge economy is achieving and achieving this goal. For this reason, Table 2 shows the KBE indicators based on a review of two studies conducted in 2002 and 2012, so that in our surveys to assess the extent to which KBE is available, we can use it. Let›s use. ((29 30)).

Table -1 Stages of knowledge growth (28)

Step 1 **Reengineering identification**	Step 2 **Reengineering knowledge**	Step 3 **Networking knowledge**	Step 4 **Knowledge-driven motivation**	Step 5 **Intensify knowledge**	Step 6 **Knowledge-based organization**
- Identify essential sources of knowledge - Knowledge audit - Awareness of the role Knowledge as a factor of production	- Redraw systems and processes - Internalization of essential activities - Secondary outsourcing of activities	- Development of cooperation within the organization - Development of cross-sectoral work teams - Dissemination of capabilities and decision-making capacities	- Provide suitable shopping options for partners - Upgrading the workforce, Including the external workforce - Pay salaries based on results	- Improving the fit of knowledge and products of the organization - Investment growth in research and development - Increase training for key employees	-Integrated knowledge management -Knowledge-based competitive strategies -The growth of knowledge-based organization

Table 2 - KBS Indicators (30) (29)

Indicators	1–Network access	2-Learning through the network	3- Network community	4- Network economy	5- Network policy
	Information on infrastructure Internet access Internet prices Network speed and quality Hardware and software Service and Support	Schools' access to ICTs Improve training with ICTs ICT workforce development	People and organizations online Network-related local content ICTs in everyday life ICTs in the workplace	Employment opportunities in ICT B2C e-commerce B2B e-commerce E-Government	Telecommunications regulations ICT trade policy
Indicators	**6- Mdeia**	**7-Intellectual capital**	**8- Education**	**9-work force**	**10- Research and development**
	Radio, television and newspapers Employment in the media	Patents Copyright permissions Brand names Scientific or technical association	Higher Education Distance Learning	Employment in scientific and technical fields Employment in the electronics industry Employment in the telecommunications industry	Research institutes Invest in research and development

Important points from the experiences of countries in relation to the adoption of KBE

Numerous lessons can be learned from the diverse experiences of the six Asian countries of India, Singapore, Malaysia, Thailand, the Republic of China and Korea. Although these countries experienced their own unique paths based on the different realities of their country, there are some similarities in their path to success. The following is a summary of the initiatives implemented by these countries based on the four pillars of the KBE mentioned above.

1. Strong leadership and political will

2. Clear policy and adequate support for their implementation

3. Strengthen communication with the private sector

4. Examine creative methods to achieve the desired results

5. Use ICT for marginalized groups

6. Combining modern technology with native (31).

Proposed initiatives

A- Country specific initiatives

Our country Iran can implement the KBE in the country and higher education institutions can learn from the experiences of other Asian countries (due to cultural proximity) that have already made progress in becoming a KBE. The important issues were summarized in the section «Important points from the experiences of countries in relation to the adoption of KBE» above. The following section also includes proposed initiatives on the implementation and enforcement of KBE pillars that can be fruitful in the country and in higher education institutions.

1- Training and skilled labor in the country

• The need for better management of educational systems and curricula in light of its important function in providing the basic foundations of learning, including «learning» and other vital skills for the twenty one century.

• The need to build effective learning environments and adopt more appropriate learning methods, including on-the-job learning methods for newcomers

• Educational institutions, especially universities and technical and vocational schools, need to re-energize their role as leaders in research and innovation so that instead of playing a role as passive agents in knowledge transfer, they can serve more in creating knowledge as proactive agents.

• The link between industry and academia needs to be strengthened to ensure that curricula and teaching methods are relevant to the business environment.

• The government needs to rethink its role towards investors and providers in order to orient and empower the education sector and to provide the policies, guidelines and guidelines needed for private sector actors in both education and determine the business. For example, our country can study and use the successful experiences of Asian countries in cooperation with the private sector to strengthen educational regulations.

2- Construction of networks and ICT in the country

• Policies and programs need to be put in place to ensure that disadvantaged sections of society are not deprived of equal access to ICT and online services.

• Maximizing the potential of ICT through private sector collaboration, especially in areas of significant social benefits such as e-learning and e-health.

• Ensuring continuous skills development among those involved in the ICT sector. Skills here include digital content production and software design, which are key skills required not only in the ICT sector, but across various sectors.

3- Creating a national innovation system in the country

- Upgrade R&D capacity
- Further strengthen the networks between the university and the sources of thought, including communication with the business
- Access and dissemination of science and technology (S&T) to local companies Given that innovation often begins and is considered in large, multinational (Western) organizations and government research institutes.
- Serious need to implement policies on intellectual property rights
- Easier access to investing in business opportunities to stimulate innovation in small and medium-sized enterprises

4- Policy and regulatory environment in the country

- The existence of a national framework that examines the relationship between the various elements of the KBE, the existence of a clear and coherent set of policies, strategies and programs that implement the policies and strategies. Translates achievable programs and programs
- Draft regulatory and regulatory environments to enable new e-business modes, create a business environment based on trust and confidence in online processes, control cybercrime, and reduce business costs due to monopoly structures Multifaceted, including in the field of telecommunications (telecommunications)
- Documenting successful experiences and new innovation practices in how KBD adapts to maximize profits from low-income Asian countries, such as (1) leveraging our country›s unique human capital; (2) creating indigenous social capital for business development; (3) optimizing a combination of cross-border development cooperation, public and private investment using a broader perspective on capital; (4) launching structural capital for direct benefit to farmers and other low-income groups; (5) Creating a new sustainable society and indigenous organizational models. (6) Setting up a network to facilitate the exchange of knowledge and very important capabilities for the poor in the country.

B- Initiatives among the countries of the region

In addition to country-specific initiatives, initiatives among countries in the region can also play an important role in guiding our country to become KBEs / KBDs. These initiatives can be implemented by ADB with the help of KBEs in the region.

1- Modeling the KBD: There is a need to formulate the basic principles and operational concepts and indicators of the KBD model, which at the national and regional levels are two important emerging issues of global development, namely «sustainable development» and «knowledge management (KM)» combines. This development could include the use of the World Bank›s Knowledge Assessment (KAM) method, which provides a preliminary assessment of the readiness of countries and regions for the knowledge economy. ADB can develop or add new items including knowledge storage and dissemination, especially those related to the dissemination of information technologies. It can analyze the rate of return on knowledge in the social and private sectors to accurately determine the impact of knowledge on productivity and growth. It can also develop new methods of measuring the performance of national knowledge networks and systems of innovation and human capital skills.

2- KBD-focused anti-poverty development programs: There is a need to examine in more detail the priorities in development programs and sectors, and attention should be paid to specific areas of focused policy and monitoring. To ensure that the planned transition to the KBE or KBD in the increasingly global economy will positively link low-income groups and socially excluded sectors of society. Such a study could be conducted on many other development programs aimed at bridging the ICT gap (for example, the World Bank for Information Technology for Development and the Canadian International Development Agency in Asia), but the discourse goes beyond ICT and Expand to KBD. In this area, a conference among stakeholders in the region can be considered.

3- Training of Planners and Establishment of KBD Electronic Planners Association in the Region: The need to design and conduct a series of training courses for high-level development / economic planners in ministries / development planning groups or economies of developing countries There are developments that include: a) New models of knowledge economy, b) Distinctive behavior of information and knowledge as economic goods (for example, appreciation of intellectual capital through its use), c) KBD model, d) Review of successful experiences of countries in the region In planning for KBD, e) practicing some of these tools in knowledge management (KM) used nationally, and c) launching an electronic community of KBD designers to share and update new KBD knowledge in the region

4- Implementation of Knowledge Assets Across the Region: The need to identify KBE / KBD strategic entry points at the regional level to facilitate cooperation and synergy among countries in the region as they move towards more knowledge-based economies and communities has it. A guiding sign in this regard is the observation that R&D networks in regions provide the mutual value and impact of the two categories of KBD, namely «innovation» and «network building». This approach may be generalized to the identification of two other principles of interoperability of knowledge assets at the regional level (Figure 2). A possible signpost for understanding the organizational forms of the interaction of the three principles (question mark (?) In the middle of Figure 2) has been identified by the Knowledge Systems Research Project at the International Center for Development Research, which could be a form of networking. Take on «development universities» or educational institutions / programs focused on innovation and entrepreneurship education and R&D.

Figure 2 - A framework for implementing knowledge assets across the region

5- Networking with Regional Organizations in Organizational Knowledge Management and Learning: Sponsor (or co-sponsor with regional organizations) a conference that schools, universities, government agencies, and civil society organizations are involved in innovating, developing, and teaching new tools. They are active in managing organizational knowledge and learning. This action can enable the exchange and sharing of experiences and networking at the regional level to promote and share the tools of knowledge management and organizational learning.

6- Assist in the development of KBE plans: In drafting a country planning strategy, for example, it is possible to combine the KBE regional, national or national vision, strategy and action plan based on the successful / good experiences of countries in the region that have such plans. Have been compiled and adopted, he noted.

7- Study of Overseas E-Commerce Policy: There is a need to identify, anticipate and propose regional solutions to problems, issues and risks or vulnerabilities arising from e-commerce, trade or the transfer of cross-border knowledge (33).

Conclusion and Recommendations

The global transition to the new era by global competition, the vast changes in information and communication, the increasing complexity of business and the pervasive globalization is a contemporary global process to which no country is immune. Building an information and knowledge-based society is largely dependent on the capacity to produce and exploit knowledge, as well as the use of ICT as an infrastructure for modern and sustainable growth and development. Our country recognizes the importance of knowledge and ICT as key strategic factors in creating KBE. The real basis of the country›s competitiveness in the 21st century is based on this action; the development of human capital capable of using «knowledge and information» in the successful management of the tangible, intangible and virtual sectors of the modern age. In order to do this, the promotion of education, especially higher education, is at the heart of the country›s development policy. Increasing the number and quality of people with higher education ensures the development of knowledge workers who are able to understand the world around them and act accordingly in an efficient and productive manner. In addition, knowledge workers and educated people will generally be able to use more ICT in terms of producing knowledge products that have a higher level of value-added production outputs than traditional production outputs.

Policy measures to facilitate the transition from a resource-based economy to a KBE and thus enrich the country›s natural comparative advantage by the competitive advantage of educated, creative and skilled human capital should focus on:

Improve knowledge guidance

Education should be recognized as a lifelong activity and should be developed to the extent possible to provide a significant mass of educated people who are able to understand and invest in the ever-emerging global opportunities and dynamic business environment.

Basic education should be improved, as skills, knowledge, learning ability and work habits determine the quality of students as input to the next stages of education. Special attention should be paid to reforming the higher education system. The curriculum should continue to support the acquisition of theoretical and scientific knowledge, while at the same time integrating practical knowledge (knowledge of how), so that students can better and faster position themselves in the environment. Take over the business. New teaching and learning methods need to be introduced so that people can apply knowledge in a more constructive way. This mostly refers to the development of entrepreneurial skills in people so that in addition to getting a job, they can also create jobs. Increasing computer literacy should be an important priority as it demonstrates basic skills in the information and knowledge-based society. The quality reform of higher education must be accompanied by a redefinition of the education financing model, as the current public resources in this sector are neither sufficient to support existing systems nor to develop them. The redistribution of government funds in favor of education should improve physical and human capacity by improving working and study conditions, which should have a positive impact on the internal and external effectiveness of both students and universities.

Improve knowledge production

Improving the Innovation Environment of the Country and Higher Education Institutions need to develop and strengthen the technological institutional infrastructure with sufficient financial support that enables the investment of knowledge. They are key elements in inspiring and supporting innovative domestic creativity that ultimately accelerates the country›s economic growth and development. Higher education institutions should be financially encouraged to do basic and applied research, that is, to enable them to have a chain of technological activities that range from long-term basic research to applied applications and it is necessary.

From a macroeconomic point of view, the government should support the acquisition of knowledge abroad through the Free Trade Act, the encouragement of foreign investment, and the issuance of technological licenses.

Improve knowledge transfer

Cooperation between higher education institutions and industry should increase significantly from the current symbolic status. Updating the working conditions of academics in terms of equipping them with all the equipment as well as the necessary resources for their professional development, ways to increase the quality and credibility of their research, and promoting them as providers of relevant and useful technical assistance to business and Industry is a real business to solve problems. Higher education institutions are not only involved in the role of technology transfer, but they can also play a key role in economic analysis and political development for their communities and regions. Economic research and analysis can assist the government, economic development organizations, and other institutions in formulating economic development plans and policies. In addition, they can help various organizations to participate in strategic planning, help organizations to develop analytical skills to participate more effectively in the economic and social development of the country.

Improving current information infrastructure

To a large extent, ICT applications are still in their starting. Communication should be increased so that well-educated people can be developed to make more use of ICT. Legal, regulatory and organizational barriers to the faster development of the ICT sector must be removed, and improving the overall business environment is a key factor that has a positive impact on the development of telecommunications services. Wide and cost-effective access to the telecommunications sector increases the use of ICT, which in turn puts pressure on the country›s economic growth. Orientation towards the use of ICT for basic word processing and more productive e-mail communications such as distance learning, telemedicine, e-marketing and other activities related to the ICT sector such as software development. The knowledge-based economy and society is definitely an achievable strategic goal for the country, because the country and the institutions of higher education have the human and infrastructure potential to support it. However, in order to do this, a joint effort between government, business, higher education institutions and the community as a whole is needed to produce, disseminate and transfer knowledge in addition to using ICT to reduce the country›s disadvantages. If our country declares knowledge and ICT as two key factors for economic development, it will start living in action and «being educated» will become a high social value and the country can bridge the existing knowledge gap. And enter the new world era with competence and confidence (34).

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