PalArch's Journal of Archaeology of Egypt / Egyptology

KNOWLEDGE-BASED ECONOMY AND ITS ROLE IN ACTIVATING IRAQI BUSINESS INDICATORS: A THEORETICAL AND ANALYTICAL STUDY

Marwan Thakir Abed
University of Anbar
Email : Marwan.Thakir@uoanbar.edu.iq

Marwan Thakir Abed Knowledge-Based Economy And Its Role In Activating Iraqi Business Indicators: A Theoretical And Analytical Study– Palarch's Journal Of Archaeology Of Egypt/Egyptology 18(1) (2020). ISSN 1567-214x.

ABSTRACT

Globalization and innovative upsets have changed the contemporary economy into what is known as a "knowledge economy". In this economy, the business world is administered by another type of associations and business, and this new structure requests the quick advancement of abilities and centered information, just as duty. Subsequently, the objective of the new type of business will be for the contemporary society to turn into an informed society, ready to adjust to the new changes. In the course of recent many years, various researchers and observers have contended that the main edge of the economy in created nations has been driven by advancements dependent on the creation and scattering of knowledge and data. Also, these new advancements - which showed up in the late fifties of the only remaining century, which extended with the spread of PCs, and afterward rose drastically with the broad utilization of email and the Internet - can possibly reshape the idea of business and the economy, as the suggestions stressed the part of colleges in building and building up the knowledge economy by focusing on the learning framework, notwithstanding supporting and empowering imaginative and creative thoughts inside associations.

This paper deals with the concept of knowledge economy, its historical stages, the requirements for establishing a new type of economy today, as well as going through the justifications for the shift towards a knowledge economy, the role of knowledge management in that transformation and some indicators of the Iraqi knowledge economy.

Introduction

In the end of 20th century, public economies around the planet confronted new, genuine, and phenomenal difficulties and openings. Innovative advances in hardware, the upset in programming applications, and the development of the interchanges framework have changed fundamental monetary capacities. For instance, electronic business has changed the customary promoting example, and web based business has gotten famous among numerous shoppers in both metropolitan and country zones. Today, electronic retail exchange and web

banking are two significant areas of financial movement that have outperformed conventional promoting frameworks by a few phases .

These progressions have changed the economy in the course of recent many years, and there is no sign that this speed of progress will back off. This change repudiates the proposition of the conventional market analyst, where difficult work was viewed as the essential factor underway. Though in the present financial circumstance, information is the essential factor rather than handcraft. The current financial conditions are alluded to as the "new" economy, the "information" economy, or the "computerized" economy. Notwithstanding, these elective terms can have various implications for various individuals, each relying upon his arrangement and work of them.

Research problem

The rapid changes that the world is witnessing in several fields (economic, political, social and technological), resulted in the abundance of information and hence to the necessity to rely on the knowledge economy as an important element in the development of intellectual capital in which a person's value has become determined by the level of his knowledge, experience and ability to learn and acquire skills. Despite the fact that many countries, such as Iraq, possess large human, natural and financial resources, the economic level is low, and this in turn affected the development of human resources for the Iraqi people due to wars, economic blockade and unstable economic policies.

Research Significance

This study gains its importance through the analysis of the intellectual contributions on the global and regional knowledge economy in the field of knowledge-based economy, which is the basis for the development, growth and advancement of human societies through the availability of an environment based on practical, scientific and technical opportunities that participate to the change of human techniques and build a better life for Knowledgeable people and benefiting from various global experiences by employing them in a way that helps advance the economy and achieve the social welfare of society.

Research hypothesis

The study starts from the assumption that improving the knowledge economy indicators in Iraq will contribute to the development of human resources.

Research Methodology

This study is based on the descriptive and analytical approach, and is based on extrapolating the intellectual output in the concept of knowledge-based economy, and the Iraqi knowledge economy indicators.

1.Notion of the Knowledge Economy

Perhaps the primary express references to the term information economy showed up in Peter Drucker's thoughts. New difficulties confronting the business area were the focal point of consideration in his work, starting with his first book, The End of the Economist (1939). In 1950, Drucker indicated that the adjustments in the essential financial and social conditions for the creation of work esteem were the focal point of what he called the "new society." In 1993, Drucker demonstrated that sharp monetary changes happen over certain many years, and these movements are of an extreme sort. Inside a couple of many years, society revises itself, its perspective, its essential qualities, its social and political construction, and numerous others. Drucker has indicated that the world is setting out toward what is known as the New World, in which the properties of significant worth creation are through data and information, as opposed to land, capital and work (Bang, et al, 2010: 617) .

The term knowledge economy acquired wide extension after the works of the Austrian financial expert Fritz Machlup in 1962. Machlup distributed an examination estimating the creation and conveyance of a wide range of information in the United States. His works offered ascend to a whole writing

on the information economy, its governmental issues, and estimation. The principal wave, which started during the 1970s, was worried about the alleged data economy. Both the data economy and the information economy have been conversely utilized as terms alluding to the information economy (Godin, 2008: 4).

The idea of the information economy is established in the expansive customs of monetary and social hypotheses. That is, the idea of the information economy is established in speculations going from data hypothesis, to post-mechanical hypotheses, to the thoughts of Drucker who begat the expressions "information society". Despite the fact that there is a wide scope of thoughts and definitions about information economy, the most well-known definition is the one created by the Organization for Economic Cooperation and Development (OECD), which depicts "information economy" as an economy that straightforwardly relies upon the creation, dispersion and utilization of information and data. (Švarc, and Dabić, 2017: 2 (

The twenty-first century economy consolidates various thoughts, among them are the data economy, the information economy, the mechanized economy, the data based economy, and others. These thoughts agree in a general sense that it is an economy wherein data itself expects a bigger part as information sources and yields, and where system, associations, automated things and irrelevant assets accept a complete part in setting everything straight creation, movement and use. It ought to be seen that the data economy isn't just another way to deal with convey and disperse product and endeavors through obvious mechanical stuff, it is a creation model portrayed by steady progression, in things and organizations, anyway in contraptions, procedures and strategies (Unger, et al. 2019: 7).

Albeit the expression "information economy" is generally utilized, there doesn't give off an impression of being a solitary concurred meaning of the term. All things being equal, at any rate three elective ideas of the information economy have been guided (Hogan, 2011: 3).

1.1. A piece of the economy which is related with the creation and scattering of data. This thought of a data economy comes from the considerations of Fritz Machlup, whose 1962 examination separated the creation and appointment of data in the United States. Regardless of the way that his work has begun an endless and continuing with premium in the monetary parts of data and information, current references to the data economy are likely going to join a more broad definition.

1.2 .Part of the economy which comprises of information concentrated modern areas. This idea partitions the economy into two areas: The first is the information concentrated area, which comprises of enterprises whose organizations utilize cutting edge innovations and have a profoundly instructed and talented labor force. The second is the non-information based area which comprises of businesses in which the labor force is less taught and less gifted, and they are coordinated to achieve "customary" creation measures .

1.3. The total economy in which the creation, conveyance and utilization of information assumes a significant part. Zeroing in on the trend setting innovation area or the purported information escalated businesses on the conviction that they are where novel thoughts are found and new innovation created, is something that overlooks reality, so if present day economies are more information serious, this doesn't really imply that they are the lone donors in the information economy. .

The scholars Powell & Snellman (2004: p201) regard knowledge economy like developing and services (including knowledge itself) based on knowledge-

intensive activities that contribute to accelerating technological and scientific progress as well as rapid obsolescence. The principle parts of a knowledge economy remember more prominent dependence for scholarly capacities than on actual data sources or regular assets, notwithstanding endeavors to incorporate enhancements at each phase of the creation cycle, from innovative work labs to the genuine plant and clients.

Another significant term should be alluded to here, which is information based economy. This term comes from a full familiarity with the part of information and innovation in financial development. Information, as it is exemplified in individuals ("human resources") and innovation, is fundamental for financial turn of events. Economic history has witnessed over the ages a shift from agriculture to a manufacturing -based economy. This shift had its effects on the social structure of societies, as new types of jobs were created in manufacturing industries, and new lifestyles of urban culture were developed. A similar shift is occurring now as business has grown globally over the past years, making the current business climate more competitive, agile and volatile (Islam, et al. 2007: 3).

2.From the Traditional Economy to the Knowledge Economy

The main differences between the traditional economy and the knowledge economy are as follows: (Hadad, 2017: 205)

- The knowledge economy is based on abundance rather than scarcity, as was the case in the traditional economy. If the resources used in the past are decreasing, then in knowledge, data and information don't diminish. Despite what might be expected, data and information can be shared and expanded through their application.
- There is not, at this point an issue with the area inside the information economy. Everything became virtual and all inclusive if the correct innovation and techniques were utilized. Time too is not, at this point an issue.
- The worth contrast for associations: items or administrations with a low thickness of information (the result of the conventional economy) can't request more exorbitant costs contrasted with comparative items with extended information (the result of the information economy), and the distinction here shows up in the most elevated estimation of information associations contrasted with those that are dictated by the state of the customary economy.
- Context is extremely important to the knowledge economy. Cost and worth fluctuate a ton as per a particular timeframe and as per people. That is, indistinguishable data or information can have diverse monetary incentive in various settings.

- Intangible assets: Human capital abilities enhance organizations, yet in spite of this, capabilities are not as a rule assessed by organizations in their yearly assertions (especially in the purely traditional economy).

Apart from the above-mentioned differences, Brinkley (2006: 13) has identified the other main differences between traditional and knowledge economies, as follows:

- The knowledge economy accompanies all sectors and levels of the economy.
- Data and correspondence innovation and talented specialists are fundamental ideas in the information economy.
- The information economy clarifies capital in a theoretical way, as in the worth increases coming about because of abilities and data, which must be disclosed by customary financial matters from a monetary or material perspective.
- Innovations assume a significant part in the information economy.
- The information economy relies upon information the executives to deal with, store and offer data.

In a knowledge economy, immaterial resources, for example, information and data the board, become the center of new skills. The present world arrangements with "information spaces", where thoughts are worth billions, while items cost substantially less. Proceeding with the equal among conventional and information based financial matters, information economy requires a reexamination of the hypothesis of variables of creation as in customary elements become optional and information turns into the essential segment of the contemporary monetary and social turn of events or social development system. Compelling information creation, procurement, and advancement inside an association has become the essential wellspring of upper hand. Associations utilizing their insight as a wellspring of upper hand are classified "learning associations". Information, as licensed innovation or scholarly capital, replaces work and capital as customary components of creation. (Hadad, 2017: 206).

(Chauvel, & Despres, 2000: 322) summarizes the most important differences between both the industrial ages (of a traditional character) and the knowledge ages (the nature of which is based on the knowledge economy), as in Table (1).

Table (1)

The Comparison between the Industrial Age and the Knowledge Age

The Industrial Age		The Knowledge Age
Tangibility		Intangibility
Financial focus		Balanced position
Submission of events		Obedience to the process
The decisive cost criterion		Critical value criterion
Periodic reports		Quick access
The value within things		Value in flow
Production stats		Creativity stats
Reporting Metrics		Management metrics

Chauvel, D., & Despres, C. (Eds.). (2000). **Knowledge Horizons: The Present and the Promise of Knowledge Management**. Butterworth-Heinemann. P322.

3. The Main Characteristics of the Knowledge Economy

The different introductions and attitudes of the knowledge economy demonstrate various normal attributes, and these qualities come from the job of information in this sort of economy. Information is the application and productive utilization of data, and it is something beyond data, since it incorporates mindfulness or understanding gained through experience, commonality or learning. Be that as it may, the connection among information and data is agreeable, since the formation of information itself relies upon the data. Nonetheless, important data must be assembled through the utilization of information . The basic characteristics of knowledge present important challenges in measuring and evaluating the value of knowledge, establishing property rights over knowledge, and thus evaluating the knowledge economy. As such, the basic characteristics of the knowledge economy can be summarized as follows (Roberts & Armitage, 2008: 345):

3.1. Knowledge is more significant contribution to the creation cycle than in the past kinds of financial matters. Information has consistently been vital in financial movement. Previously, information on creation methods, accessibility of assets, market interest and supply conditions were fundamental to the economy. During the previous three centuries, there has been a move in the measure of specialized information, yet additionally in the chance of getting to this information through distributing, the part of colleges and expert

organizations. For some experts today, realizing information is crucial for financial achievement in the twenty-first century

3.2. The knowledge economy is closely related to the information and communication technology revolution, as it is often thought to be synonymous. In other words, the information technology revolution is considered a major catalyst for the increasing focus on knowledge in economic activity. New data and correspondence advances have significantly expanded the capacity to systematize information, hence encouraging the far and wide arrangement of new creation advances and information based items. The expanding levels of correspondence encouraged by data and correspondence innovation organizations, for example, the Internet, permit the social occasion and appropriation of information on a phenomenal scale. What's more, when it is joined with the figuring power as of now accessible, the opportunities for making new information extend at high velocity.

3.3. knowledge can be considered as a business item to be traded on the lookout, regardless of whether it is through admittance to data sets, research diaries, innovative work administrations, instructive administrations, and counseling administrations .

3.4. The expanding of knowledge as a product speaks to the developing significance of licensed innovation rights. Given the expanding significance of information as a wellspring of seriousness for organizations and one of their most significant data sources, the need to ensure this information likewise increments. Information has been ensured in various manners, for example, privacy, copyrights, brand names, and licenses.

3.5. In the knowledge economy or the information economy, the laborers in the field of information become an essential and significant asset for creating and looking after seriousness. The development of the information economy brings about an increment in the interest for exceptionally taught laborers, which requires an expanded interest in instruction, particularly in the creation of graduates.

3.6. While the knowledge based economy shows up most obviously in the innovation concentrated and information areas, the impacts of information are clear in all areas of the economy. While the creation of certain businesses might be less information escalated, the association of the creation and circulation of the end result is progressively impacted by the capacity to get to and impart information and significant data inside and across a steadily expanding number of ventures.

Chauvel, & Despres (2000: 29-30) adds to the aforementioned characteristics other characteristics of knowledge economy, namely:

1-The information economy centers around the theoreticalness as opposed to the substance. Regarding yields, this is obvious in the prevalence of the administrations economy over the item economy. As far as data sources, this implies that the fundamental resources of organizations are theoretical resources like innovation and brands as opposed to land, hardware, stock and monetary resources. One investigation demonstrated that by March 1999, the market estimation of organizations had arrived at multiple times contrasted with the book esteem .

2-The information economy is organized in its existence. The remarkable chance of interconnection has become present gratitude to the improvement of new correspondence media, for example, cell and direct correspondence by means of satellite, the Internet and intuitive TV. The digitization of key parts of practically all correspondence media has incredibly extended the opportunities for coordinated effort inside associations as well as between associations.

3- The knowledge economy is a digital economy. The era of this economy has been known as the "age of sand", referring to the fact that the central

components of digital technology rely on sand, such as the silicon chip and optical fiber cable. So the digitization of information has had a major impact on the ability to transfer, store and process information.

4-The knowledge economy is the primary driver of better execution, as the US "moderate" economy obviously shows the capacity of the information based economy to accommodate high development and high work with value strength .

5-Fast development economy. The new economy is going through fast change. This is because of the quick speed of advancement and part of the correspondence effectiveness prompting fast dissemination, Recently, the speed of mechanical change has strongly quickened. This change is found in the microcomputer enterprises, the contrast between the presentation and quick market infiltration was around six years .

6-Knowledge economy is a virtual economy. The virtual association is only an illustration of the change from office work to virtual work made conceivable by digitization and correspondence

As for (Hogan, 2011: 6-9), he believes that the unique characteristics of the knowledge economy are as follows:

1- Knowledge Economics

Knowledge economics matters is totally not the same as would be expected merchandise and enterprises. Since information can deliver financial worth for its maker, yet by spreading information, there is likewise the possibility to create monetary incentive for some different clients .

Subsequently, the complete estimation of knowledge to society increments when it is shared and utilized by others.

2- Information Revolution

The data upset coming about because of advances in processing, data and correspondence advances empowers the capacity, the executives and transmission of data at very ease. The presence of these advances is far reaching in all financial areas around the world. Subsequently, the supply of information on the planet turns out to be more accessible than it was before, making it simpler to direct information based exercises anyplace on the planet. These improvements catalyze increments in information based monetary action and the speeding up of the formation of new information, the two of which impactsly affect financial development.

3- Globalization

Globalization is addressed in the effects of the globalization of financial activity, as the reductions in obligations and non-demand limits and the cancelation of market rules in various countries have animated overall trade surges of product and adventures. The headway of financial business areas and the abatement of obstructions to new direct theory and other overall capital streams have incited the mix of financial business areas and overall capital business areas and extended movements of new direct endeavor and other cash to farming countries. One of the outcomes of these examples has been the headway of the overall data economy.

4- Cumulative Effects

The interesting economic attributes of knowledge and the data unrest were among the principle factors behind the quickening in the pace of information gathering, which thusly animated expansions in information thickness in the US economy. The creation of new information (estimated by innovative work) and the increment in instructive accomplishment represent in excess of 80% of US monetary development in the post-World War II period.

4. The Requirements of the Knowledge Economy

In contemporary financial aspects, information incorporates information on people, monetary information, information influence, learning, adaptability, strength, and upper hand. In 1993 Drucker expressed that "information has

become the primary monetary asset, the predominant source and maybe the lone wellspring of upper hand." There are two ideas to this assertions, the first spotlights on information as a financial asset, and the second spotlights on information as a wellspring of upper hand. So there has been an extraordinary effect on the conventional administration approach and subsequently its case to perspective change. Information is more critical to help organizations than industrialist labor force or land assets. The greater part of the associations have understood that information is a wellspring of preferred position and a principal factor in arriving at the contemporary economy, which is known as the information economy(Al-Gharibeh, 2011: 2).

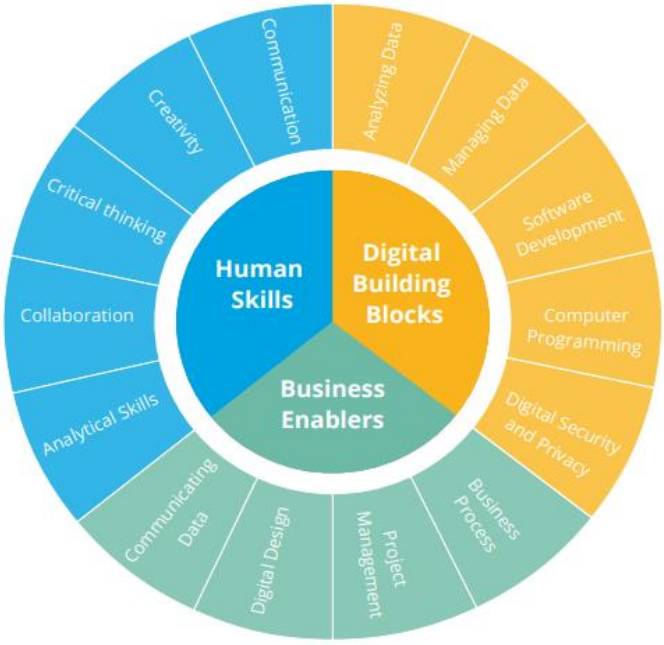
The new basic skills of the digital economy appeared in three groups: (Markow, et al. 2018: 9).

• Human Skills, for example, applying social, imaginative and basic knowledge. These abilities (which additionally incorporate basic reasoning, imagination, correspondence, logical abilities, joint effort and relationship building) show up on the arrangements of pursued "delicate abilities" that stay high across the carefully concentrated economy.

• Digital block building abilities which are fundamental for some occupations, and progressively helpful outside of customary, advanced serious positions. These abilities are particularly helpful for current or hopeful occupation experts and information driven leaders. These abilities incorporate dissecting information, overseeing information, programming advancement, PC programming, computerized security and protection .

• Business empowering agents which play a coordinated amalgamation part in the working environment. These abilities permit different abilities to work in useful circumstances, and incorporate, business measure, project the executives, computerized plan and conveying information.

Fig. (1) Digital Economy Skills



Markow, W., Hughes, D., & Bundy, A. (2018). **The new foundational skills of the digital economy: developing the professionals of the future**. Business-Higher Education Forum, Washington, District of Columbia. P10.

To locate a suitable response for how to make science, innovation and advancement the foundation of the "information economy", it is important to

create laborers, particularly with great information programs, rather than basic interest in framework. It is basic to comprehend the way that countries are constructed not by putting resources into streets, extensions, dams and energy houses, yet by releasing the inventive capability of the majority through the advancement of top notch instructive frameworks. Consequently, the essential advances needed to move towards an information economy are (Badran, 2018: 115-116):

•Providing motivators to improve innovative work in the private area for business advancement, including admittance to investment reserves, and lawful and monetary administrations including the advancement of an expert strategy to support new companies .

•Provide coordinating awards to the private area for innovation improvement, abilities advancement, and motivators for research and modern improvement in the private area .

•Formulating an unmistakable public innovation and advancement strategy that joins unfamiliar direct venture to information move in all improvement undertakings and addresses the issue of worldwide intensity .

•Establishing an innovation appraisal and anticipating association to direct normal specialized understanding examinations .

•Improving the nature of specialized preparing organizations, with worked in global accreditation to guarantee top notch creation .

•Establishing solid organizations between the different public and private area foundations to accomplish shared objectives. This will incorporate government subsidizing for agreeable innovative work activities of public significance .

•To actualize a total rebuilding of science and innovation organizations, engineers should be utilized on an authoritative premise with amazing business sector based compensations with clear objectives, complete freedom and full responsibility with standard execution evaluation .

•Providing financial admittance to a top notch ICT foundation through quick development of more extensive territory administrations .

•Establishing a spinning "advancement store" to help nearby innovation improvement in people in general and private areas .

•Promoting innovative industrialization in the private area with outer collaboration, as this is the way in to the progress to an information economy.

•Allocating sums from the gross domestic product (GDP) for science and technology programs to support the development of skills and technology in private companies.

As for the basic transformations required by organizations that aim to reach a knowledge economy, they are as follows (Kwilinski, 2017: 87-90):

• Transforming information into the most important factors and production resources for the company. The main problem for the development of the company in the information economy is the continuous research for the market

and determining this demand from consumers, the rapid development of new products, and informing customers of their advantages.

- Transforming information into direct productive power. Information system of an institution connected to the Internet is characterized by a fundamentally new ability to perceive a person's intellectual influence, and to translate that influence into real control power. This completes the transformation of information (in the form of knowledge and science) into a direct productive force, and this is evident at the institution level. At the same time, IT tools, information technologies and information functions which provide goal setting activities for employees are one of the main channels through which information is directly embedded in the production process.
- changing the company structure. Hierarchical corporate management structures are increasingly giving way to networking and collaboration. In companies in general, the basic development is not vertical, but rather horizontal cooperation, which contributes to increasing the independence of production for workers and completely changes the system of economic and labor relations.
- Changing the planning logic and procedures for company activities. An important feature of a modern company as an information system is the sharp increase in the volume, variety, and speed of transmitting, processing and issuing information. In a new information system, the control speed, including all operational control and regulation functions, is faster than the rate at which the control factor changes. While in the production systems, this aspect of the information system provides not only operational management, but also predictive management of the production process.
- The role of human capital: The role of human capital that a company uses in the information economy is primarily related to the personality of the employee, which means that a person has the ability to think conceptually and work with various circumstances, the ability to imagine and generate ideas, and the ability to act in conflicting situations. These human characteristics are shaped through the education and training process.
- Changing the scheme of cooperation and integration of the company. The information economy triggers a shift from vertical cooperation and company integration into global economic cooperation and integration based on comprehensive networks.
- Increasing the importance of the information factor in the company's effectiveness. The information economy creates common conditions for the efficient operation of firms. The development of company communication channels speeds up the transmission of information between units far from each other, the ability to manage units remotely, and control costs.
- Increasing corporate management requirements: In the information economy, the company is forced to ensure the transition from regional and local quality standards to globalism, technology, accounting and other aspects of its activities.
- Changing corporate rules. The development of the information economy will lead to the fact that in the twenty-first century there is no legislation, but technologies will define new rules for e-commerce activities. This will significantly change the operating conditions of companies. High administrative barriers and complex registration procedures must be kept minimal.
- Synergistic effect. The peculiarity of the company in the information economy is the emergence of a synergistic effect which means the benefits that arise when two or more factors are combined.

Regarding the human asset in the information economy, individuals need some particular information on tasks, and they will require at any rate an overall information on the changing industry climate and electronic business abilities.

Just as the requirement for cutting-edge, updateable and innovation related abilities. Additionally, representatives should have the option to fabricate connections and the capacity to deal with different undertakings at the same time. In particular, the abilities of laborers should have the option to manage uncertainty. In the event that employer stability is not, at this point dependent on residency, laborers in the new economy should be capable mentally just as innovatively to look at the climate and perceive openings. The prize designs will be the most unstable in the new economy, particularly for the individuals who know about their fairly estimated valuations and their exchange abilities. (McGregor, 2004: 159).

5. The Pillars of the Knowledge Economy

In 1999, the World Bank Institute dispatched a task, "Information for Development," whose objectives were to bring issues to light among public policymakers about the amazing development impacts of information, and to urge financial specialists to join worldwide and nearby information to feature similar favorable circumstances. It is accepted that a fruitful progress to an information economy regularly incorporates four segments: long haul interests in instruction, creating development limit, modernizing data framework, and establishing an empowering monetary climate. The World Bank has recognized these components as the four mainstays of an information economy. Table (2) summarizes those four pillars (Tocan, 2012: 5).

Table (2)
The Pillars of Knowledge Economy

The First pillar	The Second Pillar	The Third Pillar	The Fourth Pillar
Economic and institutional system	Education and skills	Information and communication infrastructure	Innovation systems
The financial and institutional arrangement of the nation ought to give motivating forces to the viable utilization of existing and new information and the prospering of business venture	The individuals of a nation need instruction and abilities that will empower them to be inventive, take an interest and utilize well	A powerful data framework is expected to encourage the viable correspondence and preparing of data.	A country's development framework - organizations, research focuses, colleges, think tanks, advisors, and different associations - should have the option to exploit the developing supply of worldwide information, acclimatize and adjust it to neighborhood needs, and make new innovation.

Tocan, M. C. (2012). **Knowledge based economy assessment**. Journal of Knowledge Management, Economics and Information Technology, 2(5).p6.

To take these four pillars in some detail, it is necessary to refer to the following (Kurtić, & Đonlagić, 2012: 416-417):

5.1. Effective governmental institutions and economic incentives

The impact of compelling government on financial execution is clear in created nations. Examinations in created nations have indicated a solid connection between state administration and per capita pay. While the Government Quality Index demonstrates the primary impediments to building

up an information economy, in nations experiencing significant change, the obstruction is fundamentally a negative lawful climate. By and large, observational exploration shows that financial specialists are essentially worried about the administrative structure in any country, and that they like to put resources into nations with okay political frameworks. While monetary impetuses as sound expense laws, adaptable monetary and administrative activities for licensed innovation establish a more serious business climate .

5.2 .Instruction and Training

The second mainstay of an information economy is a compelling and beneficial instructive framework that can address the issues of the economy. The significance of human resources is spoken to in the requirement for better abilities, (for example, cooperation or psychological abilities), and long lasting learning to have the option to confront business changes and difficulties. The impact of information aggregation fair and square of efficiency shows that a suitable instructive framework is important to guarantee the exchange of information in the public arena. The instructive framework is likewise a major factor in making an imaginative culture, which is fundamental for the achievement of current economy improvement. The instructive framework should guarantee the progression of information between people, organizations and establishments through participation between instructive foundations and organizations that lessen innovative work costs in organizations .

5.3.Information and Communication Technologies and Infrastructure

Exploration on the information economy accentuates the significance of data and correspondence innovation in the information economy and the monetary improvement of any country. Be that as it may, the maximum capacity of the ICT foundation can't be tapped with a lack of undiscovered labor force, customary administration rehearses, and a deficient legitimate structure. Data and correspondence advances don't produce information, yet they permit people, organizations and different associations to access, use and move information in a more proficient, quicker and financially savvy way. The improvement of data and correspondence innovation and its applications has extraordinarily expanded the interest for taught laborers.

5.4. Research, Development and Innovation

An advanced culture of innovation depends on the country's system, which must create an enabling environment for innovation in both the private and public sector. It is therefore important to remember that research and development activities require large-scale, long-term investments. The essential job of this column is on examination habitats, colleges, specialists, and different associations that can stay up with the information unrest and exploit the developing supply of worldwide information, acclimatize and adjust it to nearby requirements .

Concerning the mainstays of information economy according to the perspective (Brockmann, and Roztocki, 2017: 4450), it was appeared in his development of a reasonable structure called the system of the six mainstays of an information economy. The proposed system centers around attractive information yields, and furthermore focuses to the main parts during the time spent making this information yield. Generally, to make information yields of business esteem, development limit, authority, human resources, IT assets, monetary assets, and imagination atmosphere are for the most part mainstays of the change towards an information economy. It is as per the following :

5.4.1 The capacity to Innovate

Development limit is characterized as the capacity to create new activities with likely added esteem. It should be accentuated that advancement content

implies that it speaks to something that has not been done before in a specific climate. Furthermore, the activity should can possibly be important, which implies attractiveness .

5.4.2 .Leadership

Authority assumes the primary part in controlling technique, allotting assets, different activities and making information items and administrations .

5.4.3 .Human Resources

Human resources is characterized as the capacities, abilities, and mentalities to deliver financial worth. A skilled, accomplished, and innovative labor force is probably going to create information items and administrations that can be advertised at excessive costs. Conversely, it is hard to make information economies based on information yields in nations where a huge piece of the labor force is considered "delicate human resources".

5.4.4. Information Technology Resources

IT resources, hardware, software, and telecommunications networks support the production and marketing of knowledge outputs.

5.4.5- Financial Resources

Financial resources are one of the most important enablers in generating knowledge outputs.

5.4.6. The innovation Climate

All innovations start with new ideas. However, some climates are supportive and others hinder creative ideas.

6. Justifications for the Transition to a Knowledge-Based Economy

Understanding the expanding significance of information and innovation for financial development, many created nations have occupied with the creation, circulation and utilization of information like never before previously. In the previous few decades, the portion of cutting edge has expanded in yield and fares of the multilateral Organization for Economic Cooperation and Development. Information escalated administration areas, for example, training, interchanges and data, are developing at a quickened pace. It is assessed that in excess of 50% of the GDP .

Major OECD economies are presently information based. Without a doubt, the rise of an information based economy is related with perpetual efficiency gains and quick, non-inflationary development. The current economy (as one of the yields of the information economy) is portrayed by information with elevated levels of abilities, schooling, persistent learning and advancement as a significant motor of development with an upper hand dependent on institutional greatness and HR. In this manner, the significance of the move towards an information economy comes from the accompanying realities: (Bashir, and Ali, 2015: 71 (

- All mechanical areas are bound to turn out to be more learned .
- There are savvy items that utilization data or information to give better positions or administrations, and they can be sold at premium costs .
- Information has the most elevated extents in this (information based) economy .
- The esteem in property will be elusive .
- Trade in immaterial merchandise is quickening in an information based economy .

As exchange limits have been basically eliminated, the creation of imaginative items and administrations that can contend with worldwide firms has become an inexorably significant responsibility. The financial effects of actual distance and the expense of getting to data are limited through data and correspondence advances. Thus, the expenses of beginning another business are diminishing, and the chance to contend in new business sectors is on the ascent. While in industry-based economies, corporate achievement is estimated by truly 'benefit', and 'market esteem' is the essential proportion of accomplishment. Likewise, it very well may be said that the financial model in which information arises directs that current business tasks and occupations be more qualified. Particularly in the second piece of the 20th century because of the increment in mechanical exploration and the utilization of specialized devices and gear, which caused a blast of information because of new innovations. (Sakız and Sakız, 2016, p. 28).

The information or knowledge economy depends on interest for higher worth added merchandise and ventures, which are made by more complex, separated, and better-instructed purchasers and organizations. Mechanical advancement has been basically an empowering influence on the stock side, not the interest side. Globalization likewise goes about as a quickening agent that has speeded up the cycle across the two sides. Therefore, the particular and invigorating highlights of an information economy incorporate the accompanying (Brinkley, 2008, pp. 5-7 :(

• The basic move in venture needs towards the creation and misuse of information and other theoretical resources, for example, innovative work, programming, plan and advancement, human and hierarchical capital as a reason for upper hand .

• Knowledge economy measures suitable for all enterprises and all types of monetary movement, for example, interests in innovation, impact in the assembling and administrations areas, presence out in the open and private offices, and their significance for little and huge associations .

• Inexpensive, powerful, and omnipresent data and correspondence innovation just as thorough training up to graduate level and past .

• " The economy of great importance." That is, all the more steady employments in the information economy will be subject to working hours with higher wages .

• The development of information work isn't identified with new types of adaptable or impermanent business. Information laborers are probably going to be in secure, long haul occupations .

• The significance of public speculation needs intently lining up with the information economy, particularly on the side of innovative work, science and innovation, advanced education, business approaches and foundations .

Social orders described by the three parts (creation and propagation of information, instruments for sharing and dispersing the subsequent information, and broad utilization of new data innovations) will in general be essentially arranged towards information based creation. Accordingly, these social orders legitimize the significance of participating in the information economy by offering a specific number of favorable circumstances, which are (David and Foray, 2003, pp. 7-8 :(

• Knowledge is improved through a scope of chances for recombination, change and cooperative energies .

• A huge portion of the information base is caught, which builds stockpiling and correspondence limit, making it conceivable to grow new intellectual styles .

• Quality control is ensured in associations, since individuals can repeat, test and censure new information .

• Increase learning profitability through the way that an individual can learn by recreating others' information .

• Opportunities have arisen for the spatial revamping of exercises and the making of virtual social orders as the exchange of information has gotten less expensive for people.

7. The Role of Knowledge Management in the Knowledge Economy

In the new econemic setting, information the board is another and major field that has a central part in the serious area. In spite of the fact that there is no unmistakable agreement on the best way to characterize this control, it tends to be by and large comprehended as being liable for planning and executing a framework that means to distinguish, catch and offer information in a deliberate path inside the foundation where it very well may be changed over into esteem. As a rule, information gets significant to associations when it emphatically adds to the objectives the organization endeavors to accomplish. It isn't hard to see that information the board offers a unique significance in business. Since the 1990s, countless organizations around the planet, particularly worldwide organizations, have taken an interest in this field, taking into account that information the board is the main measure to improve execution. (Giju, et al. 2010: 27 (

As referenced before, the information economy is centered around four fundamental columns, which are the monetary and institutional framework, acquiring and abilities, data and correspondence foundation, and development frameworks. To comprehend the job of information the board and its effect on the information economy, it is critical to play the job of information the executives in every one of these columns independently. As follows :

7.1 .Kowledge Management and the Economic and Institutional System

Individuals, cycles and innovation speak to the three essential parts of information the executives. People are fundamental since they execute information the executives measures as a feature of their work and help shape a culture of information sharing. While innovation can empower and quicken information the executives, and to have the ideal impact, it should be coordinated with the manner in which individuals work, to meet their actual necessities. As indicated by the World Bank Institute's report "Building Knowledge Economies: Advanced Strategies for Development," information can go about as a driver of intensity and profitability, as a facilitator of prosperity and the climate, as an empowering agent for organizations and to accomplish administration objectives, and consequently add to the economy and social turn of events. As follows: (CEPAL, 2010, p. 4).

- Knowledge as an Enabler for Institutions and Governance: Knowledge is urgent in the arrangement making measure. It tends to be changed over into powerful choices and strategies to tackle advancement issues in the short and long haul. Most improvement arrangements rely upon distinguishing and spreading great approach rehearses in all parts of policy management .

- Knowledge as a motor of seriousness and efficiency: The World Bank's financial matters study presumed that almost 66% of the contrasts between the GDP of two nations (Ghana and the Republic of Korea), over 50 years, have not been clarified much by the gathering of actual capital and work yet by Through different wellsprings of development and profitability as information .

- Knowledge as a facilitator of prosperity and the climate: information improves legitimate sustenance measures, fixes pandemics and secures against characteristic risks, which is advantageous at the macroeconomic level .

Information the executives can be utilized as strategies to improve monetary advancement exercises. Neighborhood financial improvement establishments can utilize progressed information the executives and data innovation instruments to help nearby organizations. Monetary advancement associations can likewise profit by applying these advances to their activities. Utilizing information the board devices can assist these associations with bettering catch, arrange and impart data and information inside and outside the association. The two principle advances are: (Jarboe, Alliance, and Practice, 2001, pp. 18-20).

1- External sharing of knowledge.

The simplest beginning stage is the utilization of information the executives apparatuses and methods, particularly the Internet, for associations between the more extensive monetary improvement local area - well past the association's limits. This more extensive local area might be nearby, public or worldwide. At the neighborhood level, parties associated with cooperation incorporate organizations, nearby governments, offices of business, and local area associations. That is, the gatherings that speak to a particular interest during the time spent neighborhood monetary turn of events. While at the more extensive level, it incorporates the territorial, public and global gathering of financial improvement experts and specialists .

2- Capturing Inner Knowledge .

It is beyond the realm of imagination to expect to depict how every monetary improvement element can best utilize information the executives instruments; Every association has its own requirements. It is possible that an association needs better correspondence with a long-range field staff. Another association may utilize a Geographic Information System (GIS) to coordinate information from different sources into an exhaustive data set of nearby advancement openings. It could be utilized to make a framework that will develop into a more extensive data set catching bits of knowledge and data on the site from experts at the neighborhood and global level. In particular, information is caught from the establishment's inward offices .

7.2 .Information Management and Learning Processes

A learning association is that association wherein people build up their capacity to learn and procure information. Information the executives alludes to how an association deals with that information. That is, all marvels are

straightforwardly identified with the assignment of information. So the future workplace will be more unpredictable and the manner in which individuals procure information will change. Subsequently, organizations should grow new, predominant techniques for learning. To address future difficulties, associations should actualize new learning methods. The association ought to likewise zero in on the most proficient method to fabricate a proper learning society to help oversee learning in the working environment. (Masouras and Papademetriou, 2015, p. 46).

Today, associations need to grow quick and exact reactions to changes that increment their extension and speed step by step. In this unique circumstance, information the board and instructive exercises are acquiring expanding significance for a wide range of undertakings, not simply business endeavors. In the information period wherein we live, it is beyond the realm of imagination to expect to make an adaptable hierarchical design that can satisfy client needs through the powerful utilization of assets, ensure and improve intensity, besides based on a methodology that considers information the most fundamental and key factor. Also, in information the executives considers directed from times long past, "instruction" is a subject of specific significance, and rather than "hierarchical learning" presently "learning associations" are examined. (Yilmaz, 2012, p. 150) Knowledge the board is firmly identified with business greatness, seriousness and advancement in an association, just as cycle proficiency/viability. To accomplish these objectives, information the executives centers around the beneficial administration of every single elusive asset, for instance singular information resources, skill, data sets, expertise, and so forth On the off chance that business greatness is acknowledged as a significant objective of information the board, it very well may be partitioned into information based objectives, specifically: (Yõlmaz, 2010: 86-88).

• Transforming singular information into authoritative information: It includes moving information, which is just on the personalities of representatives, into hierarchical guidelines, principles, designs and advancements .

• Creating information straightforwardness: The association should have the option to recognize the capacities it as of now has and ought to have later on. In this specific circumstance, the association should lead its workers to secure the essential abilities .

• Facilitating data based cycles: information the board has a significant part in overseeing information and data that establish the essential components of information. As the right preparing of genuine information, along these lines changing over information into precise data that empowers exact information and successful dynamic. In this way, information and choices are made based on existing information and data .

• Preserving significant encounters: Knowledge the board can diminish reliance on individuals and forestall the errors of the past from being definitely rehashed .

• Developing a framework for evaluating the information on the association: the information qualities referenced above require incredible exertion around there.

7.3. Knowledge Management, Information and Communication Technology

Overcomers of the worldwide market and its improvement rely upon powerful and productive administration of information. It has been said beforehand that capitalization in information the executives prompts improving both hierarchical execution and venture achievement, and expanded benefits by improving the productivity of tasks, expanding quality, amount of developments, and upgrading seriousness. For associations to profit by information, they should see how information is caught, made, moved and utilized on the grounds that these cycles are the reason for viable authoritative information the executives. In such manner, the powerful use of information the board inside the association is encouraged by the compelling reconciliation of data and correspondence innovation into all authoritative information the executives measures. It has been indicated that data and correspondence innovation has influenced all the contemplated cycles of information the executives in associations. The fuse of data and correspondence innovation into the administration of hierarchical information gave at different focuses inside the association isn't just a device for getting sorted out current cycles, yet additionally an empowering agent for authoritative changes. (Hamad, 2018, p. 16376).

Data and correspondence innovation has two key jobs in associations. To start with, as a cycle, it performs information preparing carefully, changing information into data or moving information from sources to beneficiaries. Second, as a facilitator, ICTs change data into information that assists with learning or dynamic. In this way, ICTs add to all gatherings of the information cycle through information creation, stockpiling, recovery, move and application. Since inferred information is an individual to-individual methodology, ICTs, for example, videoconferencing or phone discussions, have demonstrated viable in empowering people to move implicit information. Concerning unequivocal information, as it is the strategy for moving individuals' contemplations to reports, data and correspondence innovations consider the broad reuse of information, as on account of archives. (Panir, et al. 2019: 2).

Data and correspondence innovation is frequently utilized in information the executives projects to advise customers regarding the most recent advancements and improvements in the business area just as to divide information between representatives. Similarly, ICTs encourage the aggregation of hierarchical information, give admittance to retrievable information and cultivate collaboration for information trade and creation. The primary job of utilizing data and correspondence innovation in information the board is to speed up information move to laborers. Data and correspondence innovation offices, foundation and applications, (for example, the World Wide Web, Facebook, Twitter, YouTube, and video chatting) are impetuses in the information the executives cycle. Along these lines, data and correspondence innovation gave the framework to monetary turn of events, made an information society, and added to advancement and making an incentive for the economy. (Ofori-Dwumfuo and Kommey, 2013, p. 92).

7.4. Knowledge Management and Innovation

Knowledge assumes an inexorably significant part in present day associations. Business measures are perplexing and dynamic, and manual work is supplanted by information, which requires an elevated level of abilities and experience. Though information and abilities esteemed to the association will in general be hard to supplant. In the new economy, inventiveness and information become significant components of creation, alongside capital, labor, land and

nature. In the present violent climate, the requirement for advancement in items and cycles has been generally perceived. This guides associations to apply new advancements and improve in an ideal way fully expecting changes in the market as opposed to responding to business decrease. Accordingly, information the executives spins around supporting development, producing novel thoughts and abusing the scholarly force of the association. The substance of information the board corresponding to advancement is that it gives a system to the executives in its endeavor to create and upgrade its hierarchical ability to develop. (Rahimi, et al. 2018: 68).

As per (Du Plessis, 2007, pp. 26-28), the proposed estimation of information the board in the advancement cycle is :

- Knowledge the board makes devices, stages, and cycles to make, share, and hoist inferred information in the association, which assumes a significant part in the development cycle .

- Knowledge the board helps in changing over unsaid information into obvious information .

- Knowledge the board encourages cooperation in the development cycle .

- Knowledge the board guarantees the accessibility and availability of both implied and express information utilized in the advancement cycle, utilizing the abilities and apparatuses to arrange and recover information .

- Knowledge the executives guarantees the progression of information utilized in the development cycle .

- Knowledge the board gives stages, apparatuses and cycles to guarantee the trustworthiness of the association's information base .

- Knowledge the board recognizes holes in the information base and gives cycles to dispatching holes to energize development .

- Knowledge the board helps construct the capabilities needed in the advancement cycle .

- Knowledge the executives gives the hierarchical setting to the gathering of information in the association .

- Knowledge the executives gives an information based culture in which development can be supported .

The essence of data the chiefs as indicated by progression is that it gives a framework to the board in its undertaking to make and improve its various leveled capacity to create. This can be known as the passing on breaking point. That is, it chooses the association's ability to see, assimilate and apply the assessment of new external information and data, and this limit will be fundamental in choosing an imaginative outcome. By extending this contemplation, affiliations' capacity to make creative outcomes depends upon the previous accumulation of data they have held. (Leal Rodríguez, et al. 2013: 63).

8. Basic Indicators of the Iraqi Knowledge Economy

There is a bunch of pointers through which it is conceivable to improve the information economy of Iraq, and these markers are reflected in the accompanying :

1) Expenditure on innovative work in Iraq: It communicates innovative work from the institutional, mechanical, logical action that depends on coordinating a plan for venture going through as per specialized and financial achievability standards towards upgrading reasonable information on its different helpful and logical fortes (Al-Marsoumi and Faraj, 2017: 14).

(2Knowledge-based economy: It alludes to the speculation of information (training, innovative work programs) as a level of GDP .

(3Information and Communication Technology: It alludes to the complete extent of expenditure on the data and correspondence innovation area out of the total national output .

4) Science and innovation approaches: It alludes to the absolute volume of innovative work in the public area out of the GDP .

5) Globalization: It alludes to the complete support pace of unfamiliar organizations in innovative work (Salah, 2016: 11-12).

6) Patents: Research and improvement is the fundamental contribution to the information economy, through which it is conceivable to know the degree of the state's spending on innovative work, which is reflected in the development of the macroeconomic just as the turn of events and advancement of areas electronically (Al-Marsoumi and Faraj, 2017: 15) .

7) Human asset advancement: the coordinated utilization of preparing and improvement, vocation improvement, and association improvement to improve the adequacy of the individual and the association (Deptula and Williams, 2017: 369), just as this human asset advancement speaks to a progression of efficient and arranged exercises planned by the association to give a chance to its individuals to acquire abilities Required to meet current and future staffing prerequisites (Secretariat, 2018: 1).

8) Human Capital: Human capital speaks to the fundamental asset of scholarly capital as it speaks to the principle imaginative motor for immaterial qualities in the period of information, and it is spoken to in the labor force that has the capacity, thinking, advancement and development through the implied information innate in the personalities of laborers (Al Mulla and Abbas, 2019: 60). (Al-Najjar and Al-Ramah, 2018: 321) guaranteed that human resources speaks to the inferred information that people have inside the association and incorporates capacities, encounters, interviews, abilities and preparing expressions .

9) Knowledge capital: Knowledge capital speaks to the elusive resources in the association that can be utilized to make an incentive by changing over it into new cycles, products and ventures that can be utilized as a serious weapon by the association during the time spent innovative and key turn of events and safeguarding of endurance and progression (Mazhar, 2020: 26).

10) Human abilities: It represents one of the potential internal organizational aspects that consist of knowledge, desire, behavior, performance, effective

leadership and work ability that affect individuals' achievement and increase the chances of satisfactory organizational performance (Setyaningdyah et al., 2013: 142).

Conclusion

1) The low levels of research and development in Iraq compared to other countries, and this matter is due to the difference and differentiation between Iraq and regional and global countries with the educational and scientific base.
2) The widening of the scientific gap between Iraq and the countries of the region as a result of the high spending on research and development in these countries.
3) The regional countries strategy aims to build a strategy based on knowledge and the information economy, unlike Iraq, which aims to build an annual strategy based on fulfilling the requirements for this year and not planning for the future in the long term.
4) Regional countries are considered among the scientific countries and have a prominent position in education, as a result of using knowledge and modern technologies to a large extent in fulfilling their scientific and practical requirements.

Recommendations

1) The need of the knowledge economy and the educational should be based in all stages of educational plans.
2) The need to improve the Iraqi knowledge economy by following the steps that developed regional and global countries follow in the experience of their educational processes.
3) The need to develop the level of management through professional institutions, especially the development of administrative cadres, such as training workshops.
4) The actors should pay attention to the technology, knowledge and education sector in order to improve the reality the country is going through.
5) Building institutions aimed at improving the country's economic and knowledge reality and improving the educational reality compared to Arab countries.
6) Highlighting the job of government institutions in developing and building the knowledge economy through developing or directing attention to the education system.
7) Opening and holding workshops, seminars and conferences aiming at advancing the knowledge economy of the country by developing the skills and capabilities of workers in critical roles in the country.

Works Cited

Al-Gharibeh, K. M. (2011). The knowledge enablers of knowledge transfer: an empirical study in telecommunications companies. IBIMA Business Review.
Badran, A. (2018). Universities in Arab Countries: An Urgent Need for Change: Underpinning the Transition to a Peaceful and Prosperous Future. Springer.
Bang, A., Mølgaard Cleemann, C., & Bramming, P. (2010). How to create business value in the knowledge economy: Accelerating thoughts of Peter F. Drucker. Management decision, 48(4), 616-627.
Bashir, T., & Ali, T. M. (2015) Considering Local Dimensions in Building Knowledge-Based Economy in Pakistan. Building Knowledge-Based Economy in Pakistan: Learning from best Practices i, 69.
Brinkley, I. (2006). Defining the knowledge economy. London: The work foundation, 19.

Brockmann, C., & Roztocki, N. (2017, January). The six pillars of knowledge economics. In Proceedings of the 50th Hawaii International Conference on System Sciences.
Chauvel, D., & Despres, C. (Eds.). (2000). Knowledge Horizons: The Present and the Promise of Knowledge Management. Butterworth-Heinemann.
Giju, G. C., Badea, L., Ruiz, V. R. L., & Peña, D. N. (2010). Knowledge Management-the Key Resource in the Knowledge Economy. Theoretical & Applied Economics, 17(6).
Godin, B. (2008). The knowledge economy: Fritz Machlup's construction of a synthetic concept. Project on the history and sociology of S&T statistics working paper, (37), 33.
Hadad, S. (2017). Knowledge economy: Characteristics and dimensions. Management dynamics in the Knowledge economy, 5(2), 203-225.
Hogan, T. (2011). An overview of the knowledge economy, with a focus on Arizona. A Report from the Productivity and Prosperity Project (P3), an Initiative Supported by the Office of the University Economist/WP Carey School of Business.
Islam, M. M., Khan, M. H., Islam, H., & Lamagna, C. N.(2007) The Knowledge-Based Economy: Trends and Implications for Bangladesh.
Kurtić, A., & Đonlagić, S. (2012). Determining key factors for knowledge economy development in Bosnia and Hercegovina. Management, Knowledge and Learning, 116-127.
Kwilinski, A. (2017). Development of industrial enterprise in the conditions of formation of information economics. Thai Science Review, 85-90.
Leal Rodríguez, A. L., Leal Millán, A. G., & Roldán Salgueiro, J. L. (2013). Knowledge management and the effectiveness of innovation outcomes: The role of cultural barriers.
Markow, W., Hughes, D., & Bundy, A. (2018). The new foundational skills of the digital economy: developing the professionals of the future. Business-Higher Education Forum, Washington, District of Columbia.
McGregor, J., Tweed, D., & Pech, R. (2004). Human capital in the new economy: devil's bargain?. Journal of Intellectual Capital, 5(1), 153-164.
Panir, M. J. H., Xiaolin, X., & Zijun, M. (2019). Integration of ICT With Knowledge Management to Foster Digital Innovation: The Case of Bangladesh Public Sector. International Journal of Managing Public Sector Information and Communication Technologies (IJMPICT) Vol, 9.
Powell, W. W., & Snellman, K. (2004). The knowledge economy. Annu. Rev. Sociol., 30, 199-220.
Rahimi, Ebrahim. Abbasi, Najibeh. Faranak, Rostam. Shad, Safari. Vafaei, Vajihe. (2018), "The importance of knowledge management on innovation", Applied mathematics in engineering, management and technology 5(1) 2017:68-73.
Roberts, J., & Armitage, J. (2008). The ignorance economy. Prometheus, 26(4), 335-354.
Švarc, J., & Dabić, M. (2017). Evolution of the Knowledge Economy: a Historical Perspective with an Application to the Case of Europe. *Journal of the Knowledge Economy*, *8*(1), 159-176.
Tocan, M. C. (2012). Knowledge based economy assessment. Journal of Knowledge Management, Economics and Information Technology, 2(5).
Unger, R. M., Stanley, I., Gabriel, M., & Mulgan, G. (2019). Imagination unleashed: Democratising the knowledge economy, London: Nesta.
YÕlmaz, Y. (2011). Social Software in Management of Knowledge Assets. Enterprise & Business Management: A Handbook for Educators, Consulters and Practitioners, 2010, 85.

Salah, E. (2016). Indicators of Measuring Knowledge-Based Economy: a comparative study with reference to Egypt's situation and strategies in turning to knowledge Economy. Cybrarians Journal, (44), 1-30.

Deptula, B. J., & Williams, E. A. (2017). An intersubjective perspective on the role of communal sharing in synergistic co- mentoring: Implications for human resource development. Human Resource Development Quarterly, 28(3), 369-400.

SECRETARIAT, I. P. O. B. R. (2018). "THE INFLUENCE OF HUMAN RESOURCE DEVELOPMENT IN IMPROVING PERFORMANCE OF BONE REGENCY SECRETARIAT". European Journal of Research and Reflection in Management Sciences Vol, 6(1).

Setyaningdyah.E, Kertahadi.U&Thoyib.A,2013" The Effects of Human Resource Competence, Organizational Commitment and Transactional Leadership on Work Discipline, Job Satisfaction and Employee's Performance" Interdisciplinary Journal of contemporary research in business, VOL 5, NO 4, 140-153.

Arabic Sources

Al-Marsoumi, Mahmoud Hussein, and Faraj, Jasim Hadi, 2017 "The reality of the knowledge economy in Iraq and benefiting from the experiences of some Asian countries" Al-Kut Journal of Economic and Administrative Sciences, Issue 26.

Al-Mulla, Abdul Rahman Mustafa, and Abbas, Qasim Haboub, 2019 "The Impact of Organizational Learning Capabilities on Enhancing Knowledge Capital: An Applied Research at Wasit University" Journal of Economic and Administrative Sciences, Volume 25, Issue 110

Al-Najjar, Hassan Reda, and Al-Ramah, Ihsan Ali, 2018 "Knowledge capital at the University of Babylon and the extent of its investment in national development" Journal of Babylon University for Human Sciences, Volume 26, Issue 6.

Mazhar, Ramzi Attia, 2020 "The Role of Knowledge Capital in Achieving Strategic Success: Al-Azhar University in Gaza as a Model" Journal of the Islamic University for Economic and Management Studies, Volume 28, Issue 1.