The Role of the Knowledge Economy in Harmonising the Outcomes of Higher Education with the Needs of the Labour Market

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Knowledge is considered the main engine to achieve all the objectives of education that aim at making a qualitative shift in the skills of graduates required by the labour market: this requires universities to prepare to look at traditional teaching methods and move to new teaching methods that take into account the modernity and technology necessary to develop skills and sustainability. The current paper aims to examine the importance of the knowledge economy, the reality of university education in Iraq and the possibility of benefitting from modern technologies in education and its ability to respond to the requirements of the labour market, through raising the efficiency of education which can be attained by the use of techniques and modern educational and training tools. Accordingly, the study hypothesises that the knowledge economy contributes a significant role in improving the outputs of higher education and raising the productivity of the labour force in a way that matches the needs of the labour market. Such steps lead to reducing unemployment on the one hand and raising the potential and skill of workers on the other hand. In order to clarify the concepts of the research, the researchers use two basic approaches, namely; the inductive approach and the deductive one. The paper ends up with several conclusions and recommendations. The most common error results in the weak contribution of the knowledge economy in universities which still depend heavily on the traditional method. Thus, there is an urgent need for changing this method and the adaptation to a new teaching style that adopts modern technology in all stages of study.

**Key words:** Knowledge Economy, Higher Education, Labour Market
Introduction

Generally speaking, knowledge is an essential feature of the modern era which has become a path through that is used to enter the knowledge economy. It has gained salient importance through its impact on university outputs in developed countries that have taken this knowledge and digital economy. Having positive effect, employing a knowledge economy plays a vital role in the development in quality of economic levels and upgrading the skills of university graduates. This study confirms the strong relationship between technology and knowledge so as to increase productivity, and as a result of the weak contribution of the knowledge economy in Arab and developing countries, including Iraq, in contributing in all economic, political, social and educational sectors. Actually, it requires reorientation of investments and public spending in the field of higher education towards the element of human capital and raising of its educational and training skills to meet the work requirements in order to create the required development by increasing spending on scientific research. This can be done through making way for the private sector to take its part in this area. The study is divided into three sections: the first topic includes the theoretical and conceptual frameworks of the knowledge economy. The second one deals with the conceptual framework of university education. The third topic analyses the role of university outputs in the labour market.

The Problem

The role of the knowledge economy in improving the outputs of higher education and weak allocations for this important aspect, as higher education in Iraq is still based on the traditional approach, which does not keep pace with the rapid changes in the labour market that, in return, lead to the asymmetry between the education outputs and the requirements of the labour market, as well as declining labour force efficiency and productivity. Herein lies the problem of the study.

The Hypothesis

It is hypothesised that the knowledge economy contributes to a significant role in improving the outcomes of higher education and raising the productivity of the workforce that are commensurate with the needs of the labour market. This leads to reducing the unemployment rate on the one hand and possibly raising the efficiency of workers on the other.

The Value

The importance of study stems from the role of the knowledge economy is playing, since it is the key that opens the fields of creativity, innovation and the development of behavioural and skill values for university outputs in particular, and for members of society in general.
Aims of the Study

The research aims at achieving the following:

1. Highlighting the role of the knowledge economy in developing university outputs and upgrading their intellectual, scientific, technical and behavioural levels through increasing and activating investment in human capital.
2. Assessing the role of higher education outputs in meeting the needs of labour market.
3. Proposing treatments to develop university outputs in line with the objectives of the labour market.

Methodology of the Study

Two basic approaches have been relied on. The inductive method and the deductive one are adopted to clarify the very idea of the study.

Theoretical Framework of the Knowledge Economy

The Concept of Knowledge Economy

As a result of the great development in scientific and technical fields, the concept of the knowledge economy has emerged. According to Alvin Toffler (1980), it is a branch of economic science that emphasises the importance of human capital in the development of the economy and prosperity of peoples.

Raid sees that the knowledge economy is an “intellectual capital” consisting of information, knowledge and expertise of rare economic value and high financial returns (Turban, 2001:20-4).

Thus, the knowledge economy is based on extensive and intensive uses of scientific and practical knowledge, especially the high level of sophistication in the work of the economy and all its activities in order to achieve greater growth of the economy. On the other hand, Culpethro Matsuura (2003:5) remarks that knowledge has three main stations – the first generation of knowledge and the second dissemination of knowledge, and the third is the use of knowledge. In his book entitled Origins of Economy, the well-known economic thinker, Alfred Marshall, mentions that an educated group of people cannot live in poverty because through knowledge, awareness, ambition, ability to produce, create and create, they can harness all the elements of nature and their resources to benefit them, raise their standard of living and provide them with a good life.
Michael Peter defines the knowledge economy as an economy based on the production, distribution and use of knowledge and information, which is reflected in the growth of high-level technology and technology industry (Al-Khudairi, 2001: 48). Knowledge, here is not a database only, however it is a digital technology.

Based on the above concepts, it can be said that the knowledge economy is the digital origin for all the economies of the countries all around the world wishing to achieve economic growth and development, which makes technology in the field of information and communications so important to raising production rates and competencies of workers in line with market needs.

**Elements and Characteristics of the Knowledge Economy**

Elements of the knowledge economy are as follows (Hashemi, 2007: 33-4):

**A - Ownership of knowledge**: are the property rights of those who created, such as copyright, inventions and innovation.

**B - Cognitive training**: workers in the field of the knowledge economy must be capable of absorbing modern technology and acquiring the skills necessary for the development of the economy.

**C - Financial Markets**: The digital financial and electronic banking system plays a major and essential role in reducing the waste of scarce resources by better use of modern digital means to accomplish transactions quickly and accurately.

**D - Customer Satisfaction**: Here, one must invent and innovate new methods and means of production in order to win the satisfaction of customers and raise their ability to compete in the market, where they are subject to an opinion on the quality of services provided by them.

**E - Research and Development System for Creativity and Innovation**: This system contributes to the development of the economy, including scientific ideas that raise the level of economic and knowledge.

**Attributes of the Knowledge Economy**

According to Solow (1988: 63), the knowledge economy is characterised by several basic features, which are as follows:

**A - Knowledge is the basis of production**: thus, services dominate goods in terms of outputs and innovations; ideas and brands become inputs rather than different factors of production.

**B - The Development of Communications on The Network**: this contributes significantly to the possibility of broad participation of virtual and digital projects in return for the decline of the role of formal projects.
C - It is a Digital Economy: in this system, information has become available in digital form and becomes a major influence on the speed of information transfer, storage and processing as well as a virtual system, characterised by the presence of virtual organisations, virtual banks, virtual money and virtual transactions ... etc.

There are other Important Features, As Ulayan (2008:358) states, which are as follows:

A. It is characterised by great flexibility and the ability to change, adapt to events and developments of life, and has the ability to renew and have full communication with other economies seeking to integrate with it.

B. The ability of this system is to create value added in it, and almost infinitely affect all areas of this economy.

C. This system is characterised by self-initiative and the ability to create so as to achieve what is better in performance.

D. This system has been associated with intelligence, innovative ability, dynamism and cognitive awareness among individuals and projects. It is constantly on the move in search of new talents, ideas and creative minds in order to create a new economic model based on information and knowledge systems.

Most Common Cognitive Indicators

The most important cognitive indicators are as follows:

1. Increased Spending on Research and Development. Increasing research and development spending is a key indicator of the development of the knowledge economy. Therefore, countries and other governmental and non-governmental organisations have been spending heavily on them. This, in return, has led the information technology sector to be developed and prosper. It also paves the way to the development of the reality of society in all economic sectors to be more responsive to the requirements and conditions of the labour market. This spending comes from multiple sources such as government spending, corporate spending and the spending of higher education represented by universities and institutions and also multinational companies that undertake the task of spending on research and development. (Al-Kidwa, 2010: 38)

2. Patents. A patent is a temporary monopoly right granted by the government to an inventor in exchange for publishing his invention for a period of time. Governments protect patents because they have a clear impact on increasing exports, especially exports of high-tech industries or supporting programs.

3. Scientific publications. The increasing number of scientific publications contributes to the development of the economy on the one hand, and addresses some of the problems and outstanding issues that plague society on the other hand. This is also a basis for the knowledge economy and that the increase in the publication of research papers and scientific publications
contributes to scientific and cultural awareness in the economic and social aspects through the use of various search engines.

4. Human Resources Indicators (Al-Adhari, Al-Daimi, 2010: 91-2)

A. Education and Training. The Education and Training Index allows the assessment of knowledge and skills acquired during the formal education process, the assessment of stock and investment in human capital.

B. Stock of Human Capital. Human capital is a strategic factor in the production process. The investment in the fields of formal and vocational education and continuous development programs for the performance of workers, undoubtedly leads to the accumulation of human capital, which will have a positive role in the production process and raise the efficiency of workers. (Amishel Tudarpa, 2007: 99)

Conceptual Framework of University Education

The Concept of University, its Functions and Tasks

1. The Concept of University: Universities are the locomotive of change for the better and they are one of the most important means of development and modernisation in all societies. They are integrated with the society and are aware of its needs and aspirations. Community service is one of the most important objectives that universities seek besides teaching and research. (Youssef, Bashima, 2008: 15).

2. University Functions: (Al-Daoud, 2010: 490)

A. Cognitive functions: including education and the transfer of information and expertise to students and provide them with various information and expertise in order to raise their scientific, ideological and intellectual level to contribute to the construction and development of society.

B. Scientific Research: the contribution of the university in providing research and studies of applied scientific nature (scientific, theoretical) is clear. The role of the University is no longer limited to education or teaching, but also to scientific research and community service, and universities seek to increase interest in scientific research, because of their role in obtaining inventions and innovations that are seen as the production of knowledge.

C. Dissemination of social culture: it is intended to transfer technology and heritage in its form (material and non-material) from one community to another and from generation to another and provide them with information in various fields through seminars, conferences and lectures.
D. Foresight of the Future: means that the universities are required to conduct studies and research, to cover the latest developments and forecasts related to the issues of environmental pollution, depletion of natural resources and economic and political crises facing societies and peoples.

E. Facing of electronic backwardness: despite the increasing use of the Internet in the daily lives of citizens, most of them do not have computer and cannot access the Internet from their homes. This requires governments to provide the appropriate infrastructure as well as the necessary electronic devices and make it accessible: within this framework it should take the universities into account as providing the teaching and training of students on mastery of this type of equipment because it will be a means of communication and access to the information network in order to communicate with the outside world.

3. Tasks of the University. Al-Rajhi (2010: 286) enumerates the tasks of the university, which are as follows:

A. It graduates qualified students to absorb technology, which must be compatible with the needs of the labour market, as poor planning is still the dominant feature of the relationship between universities and the labour market. This can lead to poor participation of university graduates in effective economic development.

B. The use of research capabilities of the teaching staff of universities and graduate students to solve the problems that arise during development processes.

C. Strengthening the relationship between teaching staff and scientific research centres with all government sectors in order to contribute to the development and formulation of economic policies. Depending on the forgoing discussion, it can be noted that universities in developing countries, including Iraq are still far from entering strongly into the age of informatics and modern technology required by the new economy which is based on scientific revolution, technology and knowledge.

The Role of Universities in Human Investment

Education has a direct impact on economic growth. Previous studies have shown that progress in Western countries is not only the result of physical capital growth, but also the investment in human capital since it is one of the bases of economic growth and an effective tool for economic development. Al-Kidwa (ibid: 65) mentions that there is no production without investment, and that investment in human resources through education is the one thing that achieves economic development, on the premise that education is an integral part of the process of human resources development. It is embodied in building capacity and human skills. This skill must be able to respond to the requirements of the labour market and must be based on knowledge which is a tremendous source of power to advance and present a new economy that is based on cognitive awareness, innovation and creativity (Al-Adhari, Al-Daimi, ibid: 95).
The expansion of the concept of investment in the development of human capital is to include its elements, spending on learning for all. In addition to university education and general education – such as lifelong learning, technical learning, e-learning and vocational training, as well as spending on research and development and innovation – there should be spending on science and information technology and communications (Al-Malik et al. 2009: 38).

The Concept of Human Capital and its Importance

The concept of human capital reflects the development of human resources and indicators, by increasing the choices for members of the community in many areas, especially education, health and income. Thus, the definition of human capital can be described as the total of individuals who will have the knowledge, skills and rare capabilities that will increase the wealth of nations. It represents the inputs achieved by the institutions of the talents and advanced technology used by its members efficiently to attain competitive advantages. The concept of human capital revolves around building human beings and providing the appropriate and permanent conditions to ensure the presence of members of society who are able to bring about continuous development. To keep pace with the changes of the times, there can be some insecurity during education as it depends on the development of modern plans, means and methods of scientific and technical education able to create and develop scientific knowledge and dissemination of expertise among the population to maximise the human workforce with a high level of skill (Al-Mawla, 2012: 411). Once countries, including Iraq, want to keep pace with developed countries to promote the knowledge economy and raise the efficiency of human capital, they should increase investment significantly in this vital sector, taking into consideration that modern scientific knowledge in industry offers the best comparative advantage for any country at the present time.

The Economic Importance of Human Capital

Human capital is the cornerstone in terms of economic importance in developed societies. It is the foundation upon which the development of society in general is built. One of the most important elements of production at the present time is not the goal of development, but of effective management. Economists have stressed the significance of the role of human beings and their effective and positive impacts on economic development and the effectiveness of the elements of material production. Technological changes have brought about significant changes in production processes. Therefore, the developed countries have realised the value of investing in the human element in its wealth and by the year 2030, 40% of the workforce will have knowledge, namely computer technicians, software developers, industrialists and others. Developing countries, including Iraq, still depend on increasing the size of the workforce without taking the technological factor into consideration. This has created a huge gap between them and developed countries (Thomas, 2009: 44).
Analysis of the Role of University Outputs in the Labour Market

The Reality of University Education in Iraq

University education in Iraq in the 90s of the last century has witnessed a significant quantitative expansion due to the opening of many colleges and universities that spread in all provinces.

1- The reality of primary education in Iraq: Salman (2012: 96) highlights this point saying that the study is from (2/6) years; this stage includes institutes and colleges where students receive their education and this type of education is interested in the preparation of scientific staff in various specialties. From Table (1) one can note the quantitative and qualitative development of the indicators of the reality of primary education in Iraq. It is clear that the number of students has increased to (382,873) students in the academic year 2008-2009 from 297,292 students in 2001-2002, with an annual growth rate of (3.2%), while the number of graduates witnessed a significant increase to reach (71,291) graduates, in the academic year 2008-2009 after the number of graduates in the academic year 2001-2002 and an annual growth rate of (3.7%). The number of universities for the same period has increased from (12) universities for the academic year 2001-2002 to (17) universities in the academic year 2008-2009 with a compound annual growth rate of (4.4%). The growth rate of universities has turned out to be greater than the rate of growth of the number of students and this in turn leads to a decrease in the share for each university, and this is illustrated by the student index / University as the number of students per university for the academic year (2001-2002) compared to (22521) students in each university in (2008-2009).

Table 1: Quantitative development of students of the B.A. in Iraq for the period (2000-2009)

<table>
<thead>
<tr>
<th>Number of Admission</th>
<th>Number of Students</th>
<th>Number of Universities</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>80872</td>
<td>277195</td>
<td>12</td>
<td>2000-2001</td>
</tr>
<tr>
<td>92467</td>
<td>296292</td>
<td>12</td>
<td>2001-2002</td>
</tr>
<tr>
<td>95994</td>
<td>322226</td>
<td>12</td>
<td>2002-2003</td>
</tr>
<tr>
<td>116308</td>
<td>354922</td>
<td>12</td>
<td>2003-2004</td>
</tr>
<tr>
<td>95305</td>
<td>368753</td>
<td>17</td>
<td>2004-2005</td>
</tr>
<tr>
<td>109044</td>
<td>380231</td>
<td>17</td>
<td>2005-2006</td>
</tr>
<tr>
<td>99822</td>
<td>353173</td>
<td>17</td>
<td>2006-2007</td>
</tr>
<tr>
<td>114357</td>
<td>368631</td>
<td>17</td>
<td>2007-2008</td>
</tr>
<tr>
<td>102581</td>
<td>382873</td>
<td>17</td>
<td>2008-2009</td>
</tr>
</tbody>
</table>

Development of Expenditure on Scientific Research and Education in Iraq

Abdul Jabbar (2007: 80) mentions that scientific research is one of the most important functions of universities in Iraq, in addition to the functions of education and community service. The reputation of universities is largely related to scientific research. The agreement is that scientific research in Iraq suffers from insufficient funds allocated, and that the role of the rich and private institutions is still secondary as a source of funding research in comparison to the case in other countries in the world. The lack of or low sources of funding and spending on scientific research are considered major problems that are associated to this aspect. Negatively, the weakness of spending on scientific research is reflected in the planned and completed research in general. The process of accomplishing scientific research has become a theoretical and applied precision used to address the problems faced by the Iraqi economy’s difficult and complex process. Table (2) illustrates the number of planned and completed researches for selected academic years.

Table 2: Number of planned and completed researches by Iraqi universities and the Technical Education Authority for selected academic years

<table>
<thead>
<tr>
<th>Total of completed research</th>
<th>Total of planned research</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>8606</td>
<td>10444</td>
<td>2000-2001</td>
</tr>
<tr>
<td>9222</td>
<td>14323</td>
<td>2005-2006</td>
</tr>
<tr>
<td>7420</td>
<td>10763</td>
<td>2006-2007</td>
</tr>
<tr>
<td>595</td>
<td>870</td>
<td>2007-2008</td>
</tr>
<tr>
<td>426</td>
<td>774</td>
<td>2008-2009</td>
</tr>
</tbody>
</table>

*Source: Ministry of Higher Education and Scientific Research, Department of Research and Development / Statistics Department, 2008.

It is obvious that education is the main gate and the cornerstone to transmit the information to the society in order to achieve the process of economic and social development, as well as its great importance in the preparation of the human element of efficient labour needed by the economic sectors. Thus, it is found that there is a competition between the countries of the world to attract more scientific qualifications and investment in education. Iraq has since given great importance to all phases and has allocated varying proportions of national product to education spending.

Analysis of the Labour Market in Iraq

The labour market in Iraq suffers from slow demand growth with an increase in the rate of supply growth as a result of the increase in the size of the population. There are also other reasons that are characterised by the inadequacy of investment infrastructure and the weakness of the private sector in job creation, as well as a weak productive system with the inability to
keep up with the modern challenges resulting from the high level of technical standards in human resources required by the modern production process. This relies on human skills with high technical expertise, which may lead to high levels of unemployment: high employment among university graduates on the one hand and lower among members of society as a whole that creates a gap between supply and demand in the Iraqi labour market (Al-Jubouri, 2012:72). This requires a reconsideration of the methods and means adopted in the management of the file of graduates and ways of upgrading their technical standards required by the labour market. Here, there is a need for modern testing methods and means in all fields, especially education which has to take into account the modern means and tools that adopt advanced technology in raising the efficiency of graduates. E-learning may be one of these means through which members of society can be developed at all levels – scientific, cultural, social and economic – where the type of education that depends on the Internet and satellites and modern means of communication can transfer knowledge and information all the time (Abd Al-Hai, 2005:82). However, there is a problem that affects most developing countries, including Iraq, from the lack of financial allocations directed towards education, research and development, since this area requires large financial investments that governments cannot provide. This step needs the private sector to take its part so as to meet the requirements.

**Labour Force Indicators**

**A. Evolution of the size of the labour force:** The labour force represents the human elements working in the production or service sectors in the country. It is an important part of the population, living and working as a wage or salary earner. The achievement of the state or project objectives depends inevitably on the human labour. This part of the population is actually ready to work on demand and includes two sectors; the working population and the unemployed sector. The effective population in any country can be divided into two main parts (Al-Hillo, 2008: 82):

- **B. The size of the economically active population or the labour force,** i.e., the economically active population, the persons in the labour force, and the supply side of the work to produce economic goods and services.
- **C. Outside the labour force:** the active population that is temporarily not engaged in economic activity and includes those who perform military service, prisoners and housewives. The size and type of manpower in the economy is one of the main bases of the process of economic development.

The evolution of the size of the labour force in Iraq can be seen in Table (2). It shows that the ratio of the labour force to the population has been increased in the labour force for the period 2000-2009, compared to 2003 as a result of the economic conditions in Iraq and the structural change that took place in Iraq. Public institutions have led a decrease in the labour force to
(4,864,769) in 2003 then continued to rise since 2004-2009 with a compound population growth rate of 4.39%. This has forced many workers to migrate abroad to look for jobs.

Table 3: Labour Force and Percentage of Population in Iraq for the Period (2000-2009)

<table>
<thead>
<tr>
<th>Years</th>
<th>Labour Force</th>
<th>Population</th>
<th>Labour Force/ Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>4391254</td>
<td>24086</td>
<td>18,2</td>
</tr>
<tr>
<td>2001</td>
<td>4721789</td>
<td>24813</td>
<td>19,0</td>
</tr>
<tr>
<td>2002</td>
<td>4946543</td>
<td>25565</td>
<td>19,4</td>
</tr>
<tr>
<td>2003</td>
<td>4864769</td>
<td>26340</td>
<td>0,4</td>
</tr>
<tr>
<td>2004</td>
<td>5390334</td>
<td>27139</td>
<td>0,5</td>
</tr>
<tr>
<td>2005</td>
<td>5705810</td>
<td>27963</td>
<td>0,5</td>
</tr>
<tr>
<td>2006</td>
<td>6047482</td>
<td>28810</td>
<td>0,5</td>
</tr>
<tr>
<td>2007</td>
<td>6360903</td>
<td>29682</td>
<td>0,4</td>
</tr>
<tr>
<td>2008</td>
<td>6674323</td>
<td>31895</td>
<td>0,5</td>
</tr>
<tr>
<td>2009</td>
<td>6953444</td>
<td>32105</td>
<td>0,5</td>
</tr>
</tbody>
</table>


Unemployment of Graduates and According to the Scientific Situation in Iraq

According to Salman, ibid: 124, there are four main dimensions of employment: economic, social, cultural, political, and these dimensions are closely related, and that the availability of employment is the main link for economic growth. The population is the basis for meeting the requirements of the labour force. After 2003, the problem of unemployment worsened to become a serious phenomenon threatening Iraqi society in most segments of age, class and profession; not only groups with limited education, but a wide segment including graduates of universities and graduate studies. The reason for this is hindering the movement of national economic activity. This segment of the unemployed graduates includes the pinnacle of the workforce and because of their high percentage of the total workforce, an increase in the investment of their energy is an important indicator to determine the development of the labour force in the country and its economic activities. Once focussing on the relative distribution of the unemployed, according to the scientific situation, it is concluded that unemployment generally decreases the higher the educational level. The results display unemployment and employment collated by the Central Bureau of Statistics during the years (2003, 2004, 2005, 2006, 2007, 2008). There is a decline in unemployment rates as the unemployment rate in Iraq in 2003 of the total labour force aged (24-15) reached (28.18%), which is a high percentage of the total labour force. The reasons that exacerbate the unemployment of scientific staff can be summarised as follows:
1. Lack of a clear vision of the needs of labour market and the quality of graduates and their scientific, technical level in terms of quantity and quality.
2. Economic growth has declined significantly since the 1980s due to wars and blockades.
3. Political instability, especially after 2003 and the resulting lack of attention to economic stability.

**Table 4:** The relative importance of graduates of university education in the workforce in Iraq for the period 2000-2009

<table>
<thead>
<tr>
<th>Graduates from University Education (Primary Studies / Manpower) Year</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.011</td>
<td>2000</td>
</tr>
<tr>
<td>0.011</td>
<td>2001</td>
</tr>
<tr>
<td>0.014</td>
<td>2002</td>
</tr>
<tr>
<td>0.06</td>
<td>2003</td>
</tr>
<tr>
<td>0.06</td>
<td>2004</td>
</tr>
<tr>
<td>0.05</td>
<td>2005</td>
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<tr>
<td>0.05</td>
<td>2006</td>
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<tr>
<td>0.05</td>
<td>2007</td>
</tr>
<tr>
<td>0.05</td>
<td>2008</td>
</tr>
<tr>
<td>0.06</td>
<td>2009</td>
</tr>
</tbody>
</table>

*Source: The researchers' formulation depending on data tables (3,4).*

It is seen from Table (4) that the percentage of graduates for the year (2000) of the size of the labour force (0.011%), i.e., per thousand of the workforce, there are eleven graduates with a bachelor's degree. It is also noted that this percentage has reached (0.06) in 2003 to reach (0.05) and (0.06) for the years (2008) and (2009), which indicates an increase in the proportion of graduates over time due to the expansion of the introduction of universities and colleges and the trend of students towards obtaining a B.A degree.

**The Mechanism of Addressing the Weak Relationship between University Outputs and the Labour Market**

Depending on the forgoing analysis of the reality of university outputs and the labour market in Iraq, one can conclude an important and fundamental result, namely; the university outputs are not at the technical level required by the labour market, especially in light of recent developments and accelerated global markets, and especially in those countries that adopt the knowledge economy as a method and approach to economic development. For more clarification, the following are suggested:

1. Developing the skills of the graduates in terms of technical skills and quality by rejecting the traditional and outdated classical teaching methods and adopting the trend towards modern
scientific methods that develop the technical, cognitive abilities of the graduates, which is one of the most important objectives of the economy.

2. Promoting the curriculum and keeping it up to date with the economic, political and social developments and reducing dependence wherever necessary on books and orientation towards books: research electronic means that make the educational process easier and smoother and make the recipient more receptive to science and knowledge.

3. Working out how to raise the skill level of the university professor through instituting advanced educational courses so as to keep pace with modern scientific requirements and increasing his/her skill in techniques for communicating and following an easy manner because that has a big role in increasing understanding, especially considering that the Iraqi student suffers from the accumulation of political, economic, security and pension conditions.

4. Working to allow the private sector to develop its capabilities and provide the appropriate legal and legislative environment to take its role in the process of economic development by taking advantage of the financial sources in order to contribute to the employment of graduates – those who have become a burden on the government public sector, which is solely responsible for the employment of university graduates.

5. Adopting the path of the knowledge economy as a way and method of development, especially the type of economy that adopts modern technological and scientific means that are able to make qualitative changes and achieve economic stability and increase the efficiency of the production system, that will reduce the gap between supply and demand in the Iraqi labour market.

**Conclusions**

1. Knowledge and technology is a major source of development in all sectors.

2. There is great importance in investing in the development of human capital and building knowledge to include all forms of spending on public education, training, research and development, innovation and spending on science and information technology.

3. Decreasing spending on education inevitably leads to a decrease in the level of productivity of its outputs.

4. This widens the gap between the standard of study in universities and the level of intellectual, cognitive, technical graduates, the requirements and needs of the real labour market required by the development process.

5. Lack of coordination between higher education and the private sector in relation to the objectives and plans to invest the resources available to achieve balance, which has led to the incompatibility between the outputs of education and market requirements.
Recommendations

1. It is recommended to activate the investment in human capital so as to establish the rules of knowledge building and create a solid ground for more efficient, capable and skilled education in achieving the objectives of the developmental society.

2. Increasing the allocations for higher education by the government and activating the university services for its various categories, which are provided to the society in order to obtain new sources of funding.

3. It is suggested that the value of practical study in universities is greater than theoretical: working on establishing smart universities that study modern science in the fields of engineering, applied sciences and communications will be supportive of the knowledge economy.

4. Working on the development of joint plans and policies between higher education and the private sector. The coordination between them is a must in order to create a unified vision of the objectives to achieve harmony in the labour market.

5. Paying technical education sufficient attention through the provision of labour requirements and appropriate technology and training workshops to create an appropriate environment that contributes to raising the efficiency of graduates in accordance with market needs.

6. Enabling the private sector to take its role in the process of economic development in Iraq.
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