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THE ROLE OF HIGHER EDUCATION IN ECONOMIC DEVELOPMENT IN IRAQ

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Abstract

The research aims mainly to analyze the impact of higher education on the economic development in Iraq during the period (1990-2015) by monitoring the reality of higher education in Iraq on one hand, and diagnosing the reality of economic development on the other hand. In an effort to identify the most important obstacles that limit the developmental role of higher education. And also identifying the challenges that hinder economic development, to reach to the paths in which higher education can contribute to achieving economic development in Iraq. And what the research has found at the analytical level is that higher education in Iraq suffers from weak school curricula, which are still outdated and suffer from weakness in keeping pace with progress and scientific and technological development. Its weak link with the needs of economic and social development and the requirements of the labor market. This confirms that higher education in Iraq needs further development and reform despite conferences and reforms that took place during the past three decades. In order to benefit from the developmental role of higher education in promoting access to economic development and achieving sustainable development.

Key Words: economic development, higher education, spending, growth, gross domestic product.

Introduction;

Education is one of the main pillars of achieving comprehensive development with

its economic, social and political dimensions. It is a key to the progress and

urbanization of any country due to its pioneering role in bringing about sustainable development. Economists - Adam Smith, Marx, Marshall and Malthus - have been

alerting since the eighteenth century to the importance of investing in human capital through education and training. Except that it was Transient signs. Studies and research did not take the character of seriousness and application only since the fifties and sixties of the twentieth century.

Study Problem

The process of economic development includes two basic aspects, the human element and the material component. The human element is considered the ruling factor in development because what is considered an economic resource depends on the capabilities that this element possesses. Education plays an effective role in empowering youth, by building and configuring their capacities to participate actively in cultural, social, political and economic activities. Education also plays an important role in social mobility, and in achieving equality, especially when its philosophy is based on equal opportunities while ensuring the availability of educational opportunities for all and their success in providing its beneficiaries with basic knowledge and skills. Thus, education constitutes one of the most important forms of investment in the human element in the process of economic development and increases as well from the effectiveness of the physical component to economic development. Because of the importance of the economic effects of education in general and university education in particular, in achieving economic development as determined by economic theory and international experiences, the study seeks to analyze the impact of university education on economic development in Iraq. Therefore, the basic problem of this study is to answer the following main question;

What is the reflection of university education on the economic development in Iraq during the period 1990-2016?

Objectives of the study

The study aims mainly to analyze the impact of university education on the economic development in Iraq during the period (1980-2015), and reaching this goal requires achieving a number of sub-goals;

1-Determine the impact of university education and its role in achieving economic development.

2-Analyzing the relationship of university education and economic development in Iraq, by monitoring the reality of university education in Iraq, and diagnosing the reality of economic development in Iraq.

3-Formulating a proposed program, based on the developmental role of university education, in order to enhance the economic effects of university education in achieving economic development.

Study hypotheses

The study seeks to test a basic hypothesis that there is a positive relationship between university education and economic development in Iraq. This hypothesis is divided into two sub-hypotheses, which are;

1-There is a positive relationship between public spending for university education and the real GDP in Iraq.

2-There is a positive relationship between the total number of students enrolled in university education and the real GDP in Iraq.

The importance of study

The importance of this study at the theoretical level is represented in the fact that, "continuous economic development cannot be achieved without implementing social and human development." Education represents the most important variable of social development, as well as the main dimension of human development. Achieving economic development is a necessary requirement for all developed and developing countries, and education is one of the most important forms of investment in human capital, which explains the change in economic growth not attributable to physical capital, as the human development theory indicates. Therefore, this study is concerned with analyzing the impact of university education on economic development, and

showing the direct and indirect effects of university education through which university education can positively affect the achievement of economic development, to assist economic policy makers in formulating economic and social policies that contribute to raising economic growth rates and achieving economic development.

In addition, the importance of this study on the practical level is represented in studying the impact of university education on economic development in Iraq, in order to contribute to increasing the knowledge of those interested in developing macroeconomic policies that lead to achieving economic development. This importance is also evident on the practical level, in Explaining the opportunities and challenges that enhance or limit the developmental role of university education on economic development in Iraq, in order to propose the necessary economic policies to enhance the developmental role of education in achieving economic development in Iraq.

Study methodology and used data

The study is based on the use of the analytical approach, and it aims to follow this approach, to study and analyze the relationship between the economic effects of education in general and university education in particular and economic development, on the theoretical and practical levels - Iraq - in order to arrive at a diagnosis of the current situation of both the educational situation and the economic development. This is to identify the most important direct and indirect effects that contribute to achieving economic development, and to identify the most important obstacles that limit the developmental role of university education in achieving economic development.

The limits of the study

The objective boundaries of the study are limited to study the impact of university education only without other educational stages on achieving economic development in Iraq. As for the time limits, the study is limited to the period from 1990 to 2015, and this can be justified by the beginning of the eighties and nineties, the deterioration in the university education system began, the wars and the disasters that accompany them have added many negative effects on the higher education system.

Previous studies

A group of studies emphasized the importance of education in bringing about the accumulation of human capital and economic growth, the most important of which is: the study (Ali & Jabeen, 2015), which aimed to study the effects of education on economic growth in Pakistan during the period 1973-2013, and used a standard model that represents the gross domestic product (GDP). The dependent variable expresses the changes that occur in the economic environment, and included the independent variables, education indicators: enrollment rates in basic education, enrollment rates in secondary education, enrollment rates in university education, literacy rate, health level, and concluded that education affects positively, in increasing economic growth rates, and therefore its economic effects represent a basic factor in achieving economic development.

The study (Razin, 1977) also aimed to measure the relationship between the growth of real per capita gross national product for a group of developed countries (11 states), and each of the rate of gross capital formation, gross national product, enrollment rates in secondary education, and population growth, and it measured the causal relationship between education enrollment rates and rates of change (growth) in per capita income. He also measured the reciprocal relationship between education and economic growth using simultaneous equations, and concluded that there is a high positive and important statistically significant relationship between the growth of per

capita GDP and education (enrollment rates in secondary education), and concluded that an increase in the enrollment rate in secondary education will lead to an increase in national income growth rates.

Likewise, the study (Mukit, 2012) aimed to measure the relationship between public spending on education and economic growth in Bangladesh during the period 1995-2009, using a standard model and using the joint integration test, and concluded that there is a long-term relationship between public spending on education and economic growth, the test of mutual integration is that an increase in public spending in education by 1% contributes to an increase in the GDP per capita in the long run by 0.34%, and this confirms that education is an important factor in achieving economic growth.

Also, the study (Okubal, 2005) on Uganda and the study (Omojimate, 2010 on Nigeria) emphasize the importance of education in bringing about the accumulation of human capital and economic growth. The study (Al-Shorbaji, 2007) on Taiwan indicated the importance of both increasing investments in education, and adopting policies that lead to an increase in enrollment rates, in increasing both the volume of exports and the economic growth rates in the long term. This study differs from previous studies in the following;

1. Focusing on analyzing the impact of university education only, without studying the effects of education in all its stages on economic development.

2. The main difference of this study is the time series covered by the study and starting from 1980 to 2015, as well as choosing Iraq as a case study.

Research Structure

In order to understand the subject, the research was divided into two topics;

- **Topic One** : University education and economic development
- **Topic Two**: Analysis of the relationship between university education and economic development in Iraq.

Topic One: University Education and Economic Development

Introduction

University education is the last stage of formal education, which aims to provide the individual with knowledge, skills and abilities that serve him and the community as a whole. Education that takes place within colleges or university institutes after obtaining a high school certificate, and the duration of study in these institutions varies from two to four years, is the last stage of formal education (1)

University education components

University education is considered the top of the pyramid in the educational system in all over the world, and it is the basic pillar of sustainable human development, especially in the present era, as continuous education has become one of the most important items of the strategies of developed countries. In order for the university

institution to perform the functions for which it was established, it must have actors and interacting parties, represented in:

A) Teaching Staff (Professor)

The university institution needs to perform its function an element of great importance, represented by the faculty or the university professor, who is the cornerstone of the educational process and the university faculty members usually perform two roles simultaneously; the first role is to teach university students in the various stages of university education, and the second role is to carry out scientific research for the sake of advancing science and promoting it.

B) Student group (University Student)

The university student is considered one of the basic active elements in the educational process throughout the university formation, and it numerically represents the predominant group in the university institution and the university student who, after the end of his university studies, becomes a university graduate, tends to apply his acquired knowledge and skills in the labor market, in order to achieve more distinction and creativity (2).

C) Administrative and organizational structure

The administrative and organizational structure is one of the effective components of university education, and the administrative and organizational structure is represented by the integrated and coherent human components of the administrative and organizational activities according to the general and functional structural system (the administrative and organizational hierarchy) Which manages and runs the university institution and seeks through its outputs to achieve the goals for which it was established, which motivate its members to work to direct and exert their utmost effort towards productivity and to create appropriate conditions to achieve acceptable and high levels of performance (3).

)D) Curricula (scientific subjects

The university curriculum is considered one of the basic components of university and university education, as it is the main tributary of in-depth knowledge in a specific field, and the academic curriculum is the means of education to achieve its goals

and plans and the actual and practical translation of education goals, plans and its directions.

University Education Indicators (4)

They are as follows;

A) Indicators of spending on university education:

Expenditure on higher education is the basic indicator and pillar that can be used to judge the direction of the policy pursued for education within state, and it provides us with the desired results because spending on higher education is one of the most important material inputs for the functioning of the higher education sector.

Two sub-indicators of university education spending can be identified, namely;

1)The index of spending on university education as a percentage of total government spending;

This indicator is considered one of the indicators measuring the adequacy of inputs to the higher education system, and public spending on education as a percentage of

the total government spending items are total public spending on education (current and capital), expressed as a percentage of total government spending for all sectors in any fiscal year.

2)Average student share of spending as a percentage of GDP per capita in university education;

This indicator is considered one of the indicators for measuring the adequacy of inputs to the higher education system, which is the total public spending per student in higher education, as a percentage of per capita GDP. Public spending (current and capital) includes government spending on educational institutions (government and private), education administration, in addition to subsidies provided to private sector entities (students / households and other private sector entities).

B) Total enrollment rate in university education

This indicator is considered one of the most important indicators for measuring the efficiency of the university education system, and it indicates the ratio of all students enrolled in universities to the age group of higher education schools without regard to the

age., the population employed in higher education joins the five-year group following the age at which they leave secondary education. This indicator is divided by gender into the total enrollment rate in higher education schools for females and the total enrollment rate in university schools for males.

C) Learners 'unemployment rate for university education;

This indicator is considered one of the indicators that show the efficiency of external education, and it is outside the division of learners' unemployment or graduate unemployment to the total unemployment, as the external efficiency of education reflects the extent of the educational system's ability to meet the needs of the labor market in particular and the needs of development in general, and the unemployment of graduates is considered one of the types of unemployment, which concerns the inability of holders of university degrees to obtain sustainable work in their field of study that they received in universities and higher institutes.

Economic and non-economic impacts of university education;

Numerous studies conducted in various countries of the world confirm that the positive effects of education on society and on development in general go far beyond just the economic aspects, to include also many social, cultural, environmental, political and other dimensions of development in its comprehensive human sense.

-Economic effects of university education1

The economist "Alfred Marshall" is considered one of the first economists to refer to the economic value of education. He believes that spending on education is a kind of national investment, as investment in people was considered the most valuable form of capital investment. And he considers the need for economists to pay attention to the role of education - especially university education - in economic development, and the need for the state's contribution to education expenditures, And in the middle of the twentieth century , economists 'interest in education moved from the stage of

theoretical discussion of its economic role to the stage of trying to measure the economic effects of education through the work of" Schultz and Mencer "in 1961, and they concluded that education contributes to achieving economic growth, and they considered

education an investment activity (5). Therefore, education in general and university education in particular affects many economic variables, including;

A-The impact of university education on economic growth

The direct impact of education on economic growth is achieved by improving the skills and productive capabilities of the workforce. University education represents the best form of education to acquire skills and abilities because it helps to specialize in a specific field, as well as, recognition that education, in addition to its specific economic effects, helps to promote progress towards achieving other goals such as improving health, extending life, personal advancement, participation in civil society and access to a wider range of opportunities .(6)(

B- The impact of university education on increasing national income

The economic value of education appears in its relationship to individual income that many researchers studied, most notably Walsh, who conducted a study on investment in university education. Walsh relied on previous studies in terms of the sample members, from different educational levels and various specializations, and concluded that the income of a university graduate exceeds that of a high school graduate, because of the mental abilities and talents of the university graduate with an economic value that is evident in his gaining greater income, Likewise, the income of higher education graduates varies according to the type of specialization and the level of education, that is, from the level (bachelor's, master's or doctorate), and this is related to the type, quantity and costs of education (7)

C- The impact of university education on unemployment

University education is based on providing the skilled and specialized manpower required by national development plans. Thus, higher education institutions must seek to expand their inputs to achieve a continuous increase in the number of their graduates to occupy different positions in the sectors of production and government and private services

2-Non-economic effects of university education

Higher education plays an important role in the fields of political and social development, through the multiple functions it performs.

Higher education places itself at the service of building the university personality of the graduate through (8) .

1)Spreading knowledge, promoting the concept of national identity, and developing intellectual and social trends, with what it provides for a common political culture for students.

2)Creating a broad, educated social base that guarantees a minimum level of education for all segments of society, as a minimum for knowledge and good citizenship.

3)Preparing manpower with technical skills of a high level in the various disciplines needed by society, and in the various locations of the labor market to start economic, social and political development.

Topic Two

Analyzing the role of university education in achieving economic development in Iraq

2/3/1 Preface

Many thinkers and decision-makers point out that education and nothing else can lead to a comprehensive development renaissance for any country. Experience and events have indicated that countries that have made progress in various fields of life, thanks to the quality of their educational systems and the sophistication of their academic programs, therefore, education in general and higher education in particular in our country should be given the care and attention it deserves to secure its advancement and progress in a world where there is intense conflict to possess the forefront of science and technology. As a modest effort in this area, this topic can be devoted to study the relationship between university education - being the most prestigious level of education - and economic development in all its aspects in Iraq, as will be explained later.

2/3/2.A theoretical approach to identify the role of higher education in economic development.

There is a close relationship between education in general and higher education in particular on one hand and economic development on the other side, and this relationship can be visualized in its simplest form by considering that the educational system in general provides the increasing requirements of the

qualified workforce for the economic development process on one hand, and makes scientific applied research is related to the dilemmas of development at the production level on the physical and service front on the other hand. In general, the relationship between economic development and human development planning can also be visualized through two basic approaches to planning them as follows (9)

First approach: It is based on determining the type of socio-economic development that the system will adopt, and then the educational policy and educational planning based on that pattern in order to provide the skills and specializations necessary for development capable of carrying out its mission. In this approach, which means subjecting human development to economic development or adopting educational planning on economic planning in its general form, human development becomes a function of economic development, which represents economic development as an independent variable, while human development represents the dependent variable.

As for **the second approach:** it differs from the first approach and aims to achieve full employment, is determined on the basis of which the estimation of the growth rates of the workforce within the main economic activities is determined and the investment rates required to employ the size of the work force in each activity and its impact on the generated national income, the development and growth of productive efficiency, in addition to studying the evolution of the proportional distribution of the employment structure according to the different economic sectors and activities, and then adaptation of development accordingly. In this approach, economic development is a function of human development, and then human development becomes an independent variable while economic development becomes a dependent variable.

In addition, education affects economic development through many channels, including preparing the working human cadres necessary to accelerate the process of economic development by providing competencies and skills and reducing the shortage in them. Frederick Harpison believes that building these skills and competencies is the golden key to economic development in developing countries. The higher the educational levels of individuals, will increase their ability to adapt to new jobs, and to deal with labor market conditions and fluctuations.

As well as developing individuals' talents and abilities for creativity and innovation, which leads to the development of science and used culture, increases the quantity and improving its quality, thus increasing foreign currency and accelerating the process of economic development (10)

With the increasing interest of contemporary global economic thought with human development after the human being became the intended target of development as a result of being subjected to suffering intentionally or inadvertently due to mistakes committed in adopting the best methods, this prompted many parties to work to restore the human being to the primacy he deserves, which led to the crystallization of concepts, measures and connotations related to the economic and social issue, and this, by its nature, requires a new and contemporary understanding for human development (11)

Economic development has taken at the present time to occupy an important position among the most basic issues that developing countries seek to achieve, and within the framework of this endeavor, the role of education emerges in carrying out development and benefiting from its results (12). That is, there is a reciprocal relationship between education and economic development.

In terms of application and in agreement with the objective of the research, which includes studying the role of university education in achieving economic development in Iraq, the second approach can be adopted to achieve this goal, considering human development as an independent factor in which education in general and higher education in particular is one of its components and influencing other components As well as considering economic development as a dependent factor, which is affected by the events and developments in the higher education sector.

: Higher Education and Economic Development in Iraq:2/3/3

Based on the aforementioned theoretical approach, the relationship between higher education and economic development in Iraq can be analyzed by analyzing the following relationships;

2/3/3/1:The relationship between higher education and the labor market in Iraq.

This relationship is clearly evident in the interdependence between educational institutions (schools, universities, scientific departments, the Scientific Research Center) with the sectors of the labor market (the private and public sector), as well as the outputs of education, the skills of graduates and the scientific and research outcomes that can contribute to societal development and support for the economy towards achieving economic development, and coordination between the educational structure, which represents the supply side for the number of students graduating from colleges and universities, which is characterized by inflexibility, and the labor markets that represent the demand side, which is characterized by rigidity and lack of flexibility, as well as widespread phenomenon of unemployment among citizens (13)

The nature of the relationship between higher education and the sectors of the labor **market in Iraq can be assessed through the following;**

A- The results of the study on "Higher Education and Development in Iraq" showed the following indicators regarding the level of relationship between higher education outputs and labor market needs;

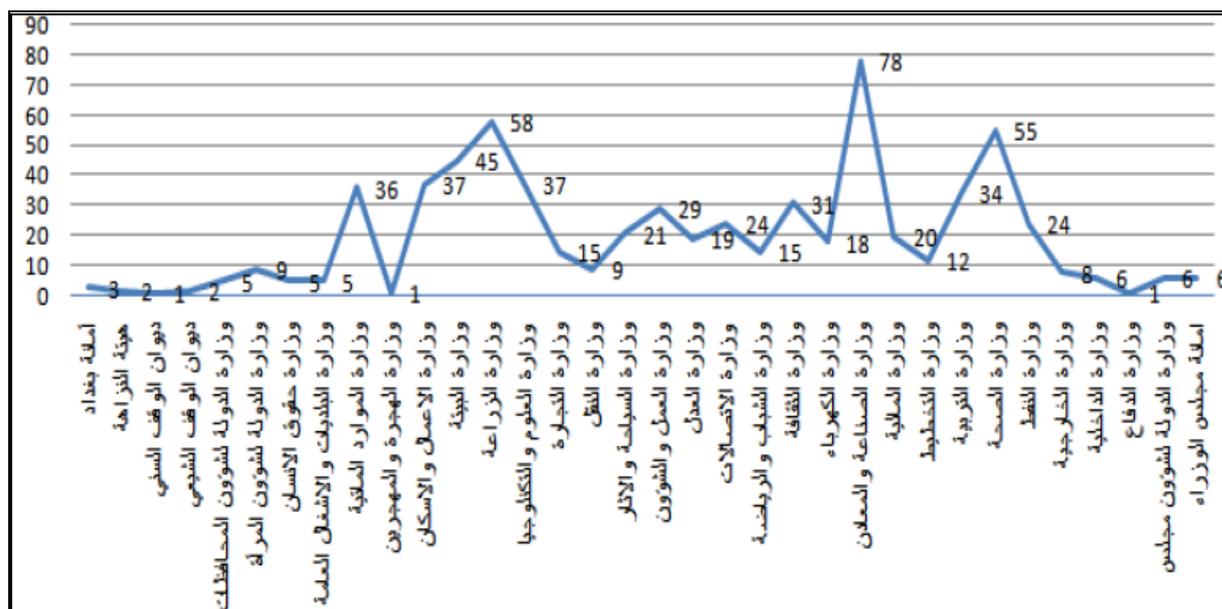
1)Employers 'evaluation of the level of graduates' possession of information, skills and ability to achieve, each with an average grade, with indications that there is a general weakness in the ability of graduates to be creative and innovative in the tasks assigned to them during the work.

2)The limited existence of labor market initiatives in developing and supporting the scientific and applied capabilities of higher education institutions.

3)The lack of governmental practices to adopt clear procedures and mechanisms to activate between educational institutions and the labor market.

A) Figure (5) shows the number of scientific products (research, projects, and patents) that were marketed to the labor market sectors for the year 2013, where (671) scientific products were marketed for the benefit of (29 ministries and (5) Iraqi governmental bodies and institutions.

Fig. (5): Statistics of scientific products marketed by beneficiaries by higher education institutions ,2013



Source: Department of Information and Relations (2014), figures and facts, achievements of three years (Publications of the Ministry of Higher Education and Scientific Research, Iraq, p 67.

C) Entrepreneurial projects and research directed to the labor market: By examining the data of Tables No. (19-2) and (20-2), which appear in the appendix, it becomes clear that the pioneering research projects directed to the labor market sectors are as follows;

1)The number of pioneering research projects implemented in the labor market sectors (5) pioneering research projects in 2014, and (48) pioneering research projects for the year 2015, for the total output of teachers in Iraqi universities that are implemented in cooperation with the labor market sectors, which confirms the existence of a case of weakness in the relationship between higher education institutions and the labor market sectors, which was previously mentioned in the previous paragraph.

2) The main problem facing higher education institutions in Iraq in relation to the labor market is the absence of the private sector from interacting with these institutions, so contracts and the achievement of scientific products and pioneering research in universities are directed towards the ministries and government sectors.

3)The amount of financial support and allocations directed to the completion of entrepreneurial research during the years (2013-2015), amounted to (40.750) billion Iraqi dinars in 2013, then decreased to (13,667) billion Iraqi dinars in 2014, and (3.060)

billion Dinars in 2015, which is equivalent to (33, 11, 2.5) million US dollars, respectively, for the mentioned years.

Based on the above, it is clear that the Ministry of Higher Education in Iraq still relies on government financial support to enable researchers to complete their scientific results, develop their capabilities in the field of projects and pioneering research, and apply them in cooperation with the ministry and government institutions (the public sector), and this matter indicates the importance of work on reducing government support for higher education and allowing educational institutions to obtain self-financing through building a real partnership relationship based on the completion of scientific research and results and the introduction of graduates with skills required in the labor market, in exchange for obtaining support from labor market sectors (financially and informally) to empower researchers and universities professors, postgraduate and primary studies students can contribute to the development of society and contribute to achieving economic development.

2/3/3/1: The relationship between GDP at constant prices and the number of graduates of university education;

University education positively affects many economic indicators that express economic development, the most important of which is the GDP, the relationship of university education graduates in Iraq - as one of the variables that express higher education and its spread within society - can be clarified with the gross domestic product, and by examining the data of Table No. (21-2) contained in the appendix, which clarifies the relationship between the gross domestic product and the number of graduates in Iraq during the period (1990-2011), the following is clear;

During the period (1990 - 2000), we find a positive relationship between the increase in the number of graduates of higher education and the gross domestic product ,The number of graduates increased from (43685)students in 1990 to(50196)

students in 2000, with an increase of (6511) students and a total growth rate of 13.65%, this increase was reflected in the GDP, which increased from (47, 13) trillion dollars in 1990 to 63.27 trillion dollars in 2000, with an increase of 16.14 students and an overall growth rate of 34.25% during the period.

As for the period during (2001-2006), we also find a positive relationship between the increase in the number of graduates of higher education and the gross domestic product, as the number of graduates increased from (49,935) students in 2001 to (74,669) students in 2006, with an increase of (24,734) students, and an average total growth (49.5%) during this period. This increase was significantly reflected in the development of the value of the gross domestic product, which rose from (64.77) trillion dollars in 2001 to (80.31) trillion dollars in 2006, with an increase of (15.54) trillion dollars, and with a total growth rate of (24%)

But during the period (2007-2011) this relationship changed between the numbers of graduates and the GDP in Iraq, it is noticed that the number of graduates in university education decreased from (75529) students in 2007 to (74082) students in 2011. In the same period, the value of the total GDP increased from (84.69) trillion dollars in 2007 to (95.06) trillion dollars in 2011.

These results have been confirmed by many studies, including the study (Moussaoui, 2015) (14), which was conducted in Algeria, where it indicated that the outputs of higher education contribute positively to the formation of the gross domestic product.

2/33/2 The relationship between GDP with constant prices and gross enrollment ratios in higher education;

Higher education plays a pivotal role as it is entrusted with the formation of the highly qualified workforce and the leadership elites needed by countries, especially in this period when societies and economies have become dependent on knowledge as a major driver of economic growth. Accordingly, the progress of any country today depends on the educational levels of its residents as well as one of the mechanisms used to measure the progress of countries towards establishing a knowledge society (15). The enrollment ratios in higher education are among the important international indicators in the field of quality, as they express the extent of development in absorbing the human capabilities of countries and providing educational opportunities for their citizens. The total enrollment rates for higher education are reflected in the economic indicators of the society, including the GDP, and this can be illustrated through the data of Table No. (22-2) contained in the appendix, which indicates a positive relationship between the gross

enrollment rates for higher education and the gross domestic product.

During the period (1990-2000), total enrollment rates for higher education increased from 12.6% in 1990 to 13.6% in 2000, and this increase was associated with an increase in the gross domestic product from (47.13) trillion dollars to (63.27) trillion dollars. The relationship between higher education gross enrollment rates and the GDP in Iraq continued during the period (2005-2015). the total enrollment rates for higher education increased from 15.4% in 2005 to 18.1% in 2015, and the increase in these rates was linked to the increase in the value of GDP, which rose from (76.23) trillion dollars in 2005 to (120) trillion dollars in year 2015. The National Strategy for education and higher education in Iraq aims to reach the enrollment rate in higher education by 20% for the academic year 2021-2022 (16)

These results were confirmed by several studies, including the study (Huange et al, 2009) (17) that was conducted in China, which showed the existence of a joint complementary relationship between those enrolled in university education and the gross domestic product during the period (1972-2007), and indicated the importance of expansion in higher education to ensure continued economic growth rates.

2/3/3/3 The relationship of universities number to population numbers in Iraq and some Arab countries;

The relationship between the number of universities and population numbers represents the vital interaction between the university and society, as the university's role expanded and developed with the passage of time, and the door of universities was opened to the vast majority of the community in order to benefit as much of the population as possible, When the population of each university is less, the educational opportunity available to the residents is better..

Table. (23-2) shows the development of the number of universities and the number of population during the years 1990 and 2000, and the table data indicated the development of the number of universities in Iraq, which increased from (11) universities in 1990 - where the population was (18,080) million people, and the share of the university became one the equivalent of (1.6) million people - to (13) universities in 2000 - where the population was (24,086) million people, and the share of one university became equivalent to (1,9) million people, and this

number of universities is relatively large in comparison. to the population of Iraq, and compared to most Arab countries such as Syria, Saudi Arabia, Egypt, where the number of inhabitants of each university in 1990 amounted to (3.29) million, (1,96) million an (3,43) million, respectively, compared to the year 2000 reached (4.08) million, (2.27) million, and (3.96) million, respectively.

The development of higher education availability in Iraq has continued to be better during the period (2010-2015), compared to most Arab countries. Table. (2-24) illustrates the development of university numbers and population numbers during 2010 - 2015, and the table data indicated the development of the number of universities in Iraq rose from (18) universities in 2010 - when the population was (23,490) million, and the share of university became equivalent to (1.3) million people - to (35) universities in 2015 - when the population was (36,936) million. and the share of university became equivalent to (1.05) million people, and this number of universities is relatively large in comparison to the population of Iraq, and compared to most Arab countries such as Syria, Saudi Arabia, Egypt, where the number of inhabitants of each university in 2010 reached the equivalent (3.45) million people, (1.106) million people, and (3.42) million people, respectively, compared to 2015, which amounted to (3.76) million, (1.05) million, and (3,068) million people. respectively.

2/3/4 The role of the University of Technology in the economic development in Iraq.

This part discusses the role of University of Technology in the Iraqi country in economic development as it is the first technological university established in the Arab world in 1975. As the university's functions are usually defined by three functions , preparing scientific staff, conducting research and community service, and the University of Technology since its establishment until now has graduated thousands of Engineers and technicians ,equipped with modern engineering knowledge and in a way that does not differ from their peers, graduates of engineering faculties in traditional universities, except that their numbers curricula are linked to practical training more that qualifies them to perform better in industrial institutions upon their graduation from university (18)

The University of Technology is also an important source for preparing the engineering and technological staff in Iraq, as

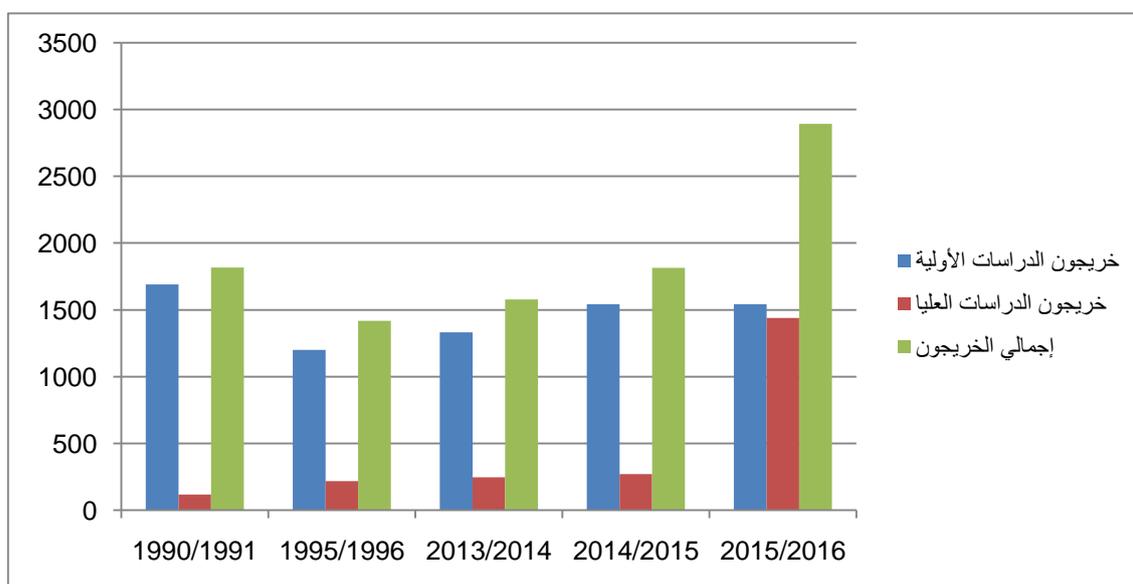
hundreds of engineers and technicians graduate from it annually with bachelor's, master's and doctoral degrees to supplement development plans. The universities have close working relations with many industrial institutions, including the exchange of scientific visits and the organization of training programs for students in its laboratories on the one hand, and for employees of institutions in laboratories and laboratories of the university on the other hand, as well as joint supervision of the theses of diploma, masters and doctoral students.

The University of Technology is currently the largest resource in Iraq responsible for preparing engineering and technology cadres, not only at the level of initial studies, but also for postgraduate studies, which include diploma, master's and doctoral studies, in addition to the university's excellence in unique qualitative studies at the level of the country's universities. Table (2-25) shows the number of engineers and technologists who graduated from the university during the period from 1995/1996 to 2015/2016.

We find during (1995-2015) that the number of graduates at the postgraduate level has significantly improved, so the numbers of graduates at the University of Technology has increased from (1418) students for academic year 1995/1996 to (2892) students in the academic year 2015/2016 , at the level of primary studies

, the number of students increased from (1200) students to (1542) students, and with regard to postgraduate studies, it increased from (218) students to (1440) students during the same period, as is evident from Fig. (6)

Fig. (6): shows the numbers of graduates of the elementary and postgraduate studies in Iraq during (1995-2015)



Undergraduate graduates



Preparatory studies graduates

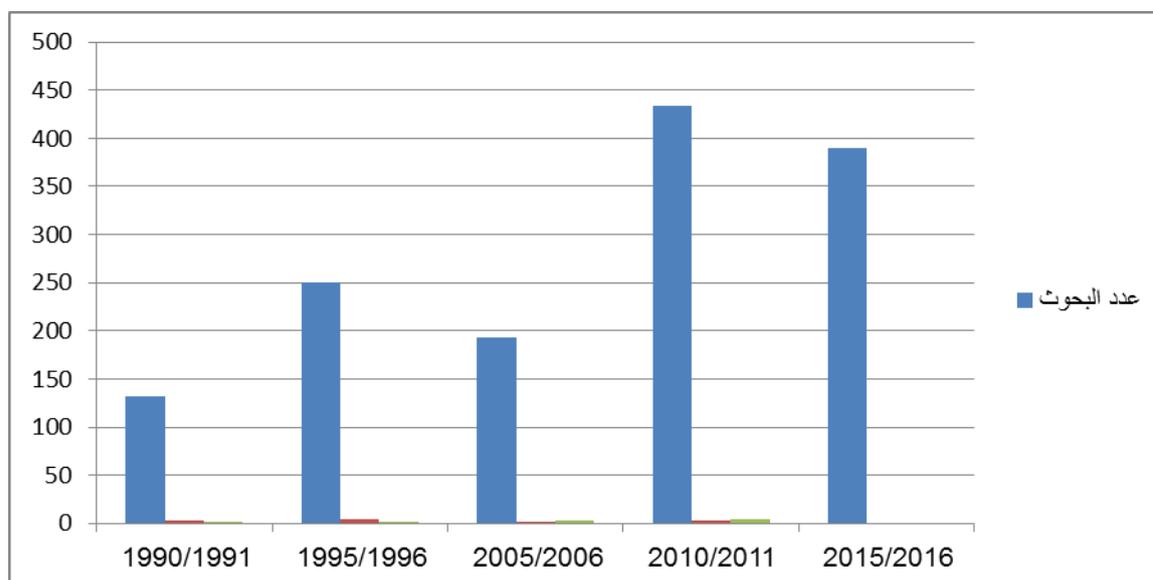


Total graduates



Also during (1990-2015) the numbers of research carried out at the university of technology in Iraq developed from (132) research for the academic year 1990/1991 to (390) research for the academic year 2015/2016, as is evident from Fig.(7) and the table (2-26) mentioned in the appendix.

Fig. (7): shows the volume of research carried out during (1990-2015)



Research number



2/3/5 proposals to enhance the role of higher education in achieving economic development in Iraq:

In order to meet the internal and external challenges of higher education in Iraq, ensure that it keeps pace with contemporary scientific and technological developments, and upgrade its level of efficiency and effectiveness to achieve comprehensive development and community service, we recommend to take procedural steps to achieve the goals of this vital sector, which is the basis for the development and growth of all sectors of the national economy and the desired progress through the following (19)

1-Supporting the efforts of the Ministry of Higher Education and Scientific Research in preparing the requirements for implementing the strategic trends adopted by the National Committee of Education in “2012-2022” through the cooperation of the concerned authorities in the governmental and private sectors with them to secure the necessary financial resources and labor market expertise and relevant regional and international organizations, and various administrative and logistical matters that would facilitate

the implementation of the strategic projects approved by the ministry.

2-Building a community partnership strategy that ensures in strengthening the link and partnership between higher education institutions and the economic and social sectors of society, and applying the principle of "productive university" in community service through the following measures;

-Supporting and developing directions for engaging the relevant labor market sectors in the boards of higher education institutions and actively contributing to planning and monitoring academic programs, and evaluating educational institutions in order to achieve a better match between higher education outputs and the requirements of the labor market.

-Enhancing knowledge and skills in curricula and training programs with field experiences, so that the theoretical stock of those knowledge and skills is not all that the graduate possesses, so that after his transition to practical life, he discovers that it is an inapplicable wealth.

-Cooperating with the Ministry of Planning and Development Cooperation, Ministry of Labor and Social Affairs, and the sectors of the labor market in the procedures of studies on the temporary and future needs of the labor market in terms of professions and skills, then arranging them according to priority and application potential, in order to direct programs and assignments towards the labor market, as well as directing the admission policy and distributing students to appropriations under it, based on the principle of supply and demand.

-The educational institutions transfer the modern trends in the field of work expected for the graduate and include them in the vocabulary of the study materials and training programs through the mechanisms of the teachers and trainers' practice of their specializations in the workplace, and investment of the expertise of specialists in the field of work in teaching and training, as well as adopting the principle of field training for students during the summer holidays As is the case in the Technical Education Board.

-Higher education institutions link their scientific research with the reality of society and its problems and work to solve them, support and escalate the directions of the Ministry of Higher Education and Scientific Research in adopting the principle of partnership with

the labor market sectors in conducting research, and expand the areas of adopting the mechanism of research contracts between educational institutions at the level of the educational institution ,the professor, the scientific department, and postgraduate students (With the corresponding sectors in the labor market, as well as the services provided by consulting offices to the community.

-Activating the participation of all scientific centers affiliated with higher education institutions in providing advisory services and scientific research activities directed at community service and evaluating their performance based on the criteria for their association with the economic and social sectors of society related to their specializations, especially since their activities during the past three years were generally characterized by relative weakness **(Quantity and type)**

-Focusing on specializations for which the expected future need is growing in reconstruction and investment programs and projects, and keeping abreast of contemporary developments in the fields of science and technology, such as communication and information technology, automation, computer and various engineering disciplines And biotechnology, electronic industries, medical services

information security, electric power generation, electronics, renewable energies, petrochemical industries, stock exchange business, financial affairs, insurance, administrative services, economics, tourism and hospitality, and other disciplines to which reconstruction and development needs escalate, while not neglecting other scientific and humanitarian disciplines.

Conclusions

1-Identifying the most important obstacles that limit the developmental role of higher education.

2-Identifying the challenges that hinder economic development, leading to the paths in which higher education contributes to achieving economic development in Iraq. .

3-Continuous economic development cannot be achieved without social and human development.

4-The research also derives importance from analyzing the role of higher education on economic development in Iraq.

Recommendations;

1-The researcher concluded that the role of higher education in economic development suffers from weakness in the school curricula, and it must be updated as it is still outdated.

2-The framework for cooperation between developed countries should be opened by increasing the number of students on scholarship to the developed countries.

3-Active participation in the most recent international development conferences, courses and seminars.

4-Increasing the allocations to scientific research by increasing the budget of the Ministry of Higher Education and Research.

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