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The policy of spending on education and its role in achieving economic growth in Iraq for the period (2005-2022) with reference to the Singaporean experience / strategic vision

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Abstract
Economic literature, especially macroeconomic models, indicates that there is a relationship between spending on education and economic growth. This relationship has attracted the attention of many economists and researchers for many decades and has been the subject of intense controversy. Education and development complement each other, as investment in education has contributed over the years. There is a lot in developing the economies of many countries and making it one of the strongest economies, including Singapore. Despite the achievements that have been made in the field of quantitative expansion in education, the situation of education in Iraq is still modest compared to the achievements of other countries, even in the countries of the developing world, due to financial and administrative corruption? His journey witnessed great fluctuations as a result of the exceptional circumstances that the country went through during the research period, which led to the obstruction of the educational process in Iraq. The results of the long-term response that were tested on the standard side show the presence of a weak positive effect, as spending on education exerts a weak positive effect on the average income share. Per capita GDP in the Iraqi economy for the period (2005-2022), and this applies to the reality of the Iraqi economy.

Keywords: Economic literature, macroeconomic models, education spending

Introduction
The issue of the impact of expenditures on education on economic growth and vice versa is one of the main and important issues that help to understand the dimensions that may affect economic growth, as a result of the main and vital role played by expenditures on education as an important tool in the development of human resources, which has a major role in achieving economic growth, which allows the development of the state's ability to accumulate capital and push the rate of economic growth to the level of ambition, although public expenditures enable The government runs its organs and departments, but the size of these expenditures largely reflects the effectiveness of the government and the extent of its impact on economic activity, meaning that its impact is prominent in the rates of national income, which in turn affects economic growth.

- **The importance of research:** The process of determining the direction of the relationship between expenditures on education and economic growth, is of particular importance in the formulation of economic policies, especially in developing countries, including Iraq, where it is occupied, and that the lack of decisive decisions in opinions, whether in theories or applied research on the direction of the relationship between the two variables was a reason for choosing the subject of research, especially since expenditures on education are constantly increasing in the Iraqi economy.
- **Research Objective:** The research aims to measure and analyze the results of measuring spending on education and its effects on economic growth in the Iraqi economy for the period (2005-2022).
- **Research hypothesis:** Based on the research problem, the following hypothesis can be

formulated: The relationship between spending on education and its effects on economic growth in the Iraqi economy for the period (2005-2022) is a positive relationship.

- **Research Methodology:** For the purpose of reaching the goal that the research aspires to achieve, quantitative analysis tools have been used to measure the relationship between spending on education and its effects on economic growth in the Iraqi economy during the research period.
- **Research Limits:** Spatial Boundaries: Iraqi Economy. Temporal limits (2005-2022).

The first axis: The theoretical and conceptual framework for education

The concept of educational policy: The concept of educational policy refers to the general form of educational stages in which the learner is organized and the objectives of each of these stages, and a set of plans, programs and trends, as well as laws, rules and general foundations in the light of which the process of education and education is proceeding The thinker (Dror) defines educational policy-making as a dynamic and complex process characterized by the diversity of its components, each of which has its own different contribution, as it determines the basic lines of action and is characterized by its orientation towards the future and its withdrawal to achieve the public good. In the best possible way (Johar, 2009: 43), that educational policy usually determines the framework of education, its philosophy, goals, stages and types, as no nation can rise intellectually and civilized unless it has a clear and realistic educational policy derived from the philosophy of society and consistent with its principles and values, as educational policy based on scientific foundations helps to achieve several goals (Abou El-Enein, 1984: 12) [2].

1. Develop plans and build programs that ensure the building of the individual's personality in accordance with the beliefs of society.
2. Define a mechanism for measuring performance in the educational system.
3. Identify the frameworks, principles and values in the light of which the educational process is conducted.
4. Directing and making the right decisions to achieve the set goals.
5. Identify the administrative bodies responsible for implementing these policies.
6. Solving multiple pedagogical problems.

Education The: It is one of the most important indicators of social human development, because of its great impact in providing them with bright minds and has a major role in increasing production, so when developing the means of education from the primary stages to the stages of higher education, it has a clear role in raising the level of human development, especially since the majority of the inputs of productive projects and administrative and economic institutions are outputs of educational institutions, and from here education has a prominent role in developing and developed countries and the only way to develop the capabilities of It also contributes to the acquisition of talents in individuals and helps them to create and innovate **(**Rasan and Ali, 2013: 205) [10]. Human development approached education from three main angles: (Al-Qasafi, 1995: 92) [16].

- **The first angle:** concerned with education as a tool for acquiring technology (technology).
- **The second angle:** emphasized linking education to the needs of the labor market.
- **The third angle:** education as a basic right of individuals aims to improve the situation of individuals and not prepare them for work only.

Education is one of the basic factors that reflect the level of human development reached by any country, reading and writing is the first step to acquire knowledge, and at a time when technical change is affecting the manifestation of life, and education has gained special importance as a basis for achieving economic growth and human development at the same time, and the great expansion witnessed by the educational systems of advanced industrial countries towards continuous and open education in response to the nature of the rapid change of technological change in the second half of the twentieth century. To participate in it, education helps to improve the human condition and their ability to obtain and use information to influence economic growth, increases human capacity, helps them meet their needs and increase their productivity.

Primary education: The stage of primary education with its six years is the basis in the educational pyramid in Iraq after kindergarten (kindergarten), so the interest in this stage is necessary for the success of the educational process for the subsequent stages and therefore must provide all its requirements and requirements and planning and follow-up as it includes a group of ages that constitute a large percentage of the population and need great attention compared to other stages of education and the education policy at this stage aims to empower children of the age group (6 12) A year of developing their personalities in their various educational, mental, emotional and national aspects (Al-Azzawi, 1999: 78) [14].

Secondary education: Secondary school is the second stage after primary school and represents the stage of secondary education, both intermediate and preparatory, an important place in the educational ladder and that its impact is great on the student's life and building his personality as it represents an important age stage that includes the age group (1218) years, and secondary education in Iraq is divided into intermediate study for three years, and preparatory study for three years also and its scientific and literary branches, while secondary school has a comprehensive system for the intermediate and preparatory systems (Al-Khashali, 2004: 88) [8].

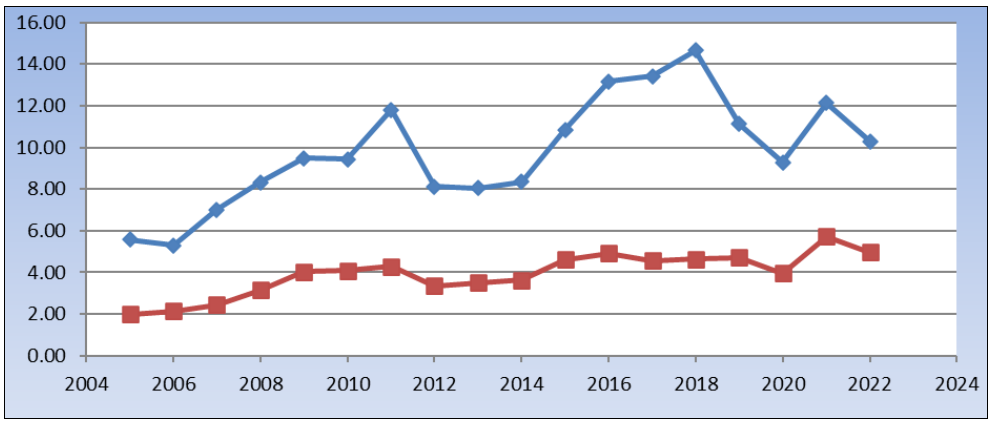
Spending on education: Government spending on education is one of the long-term investment opportunities, to reap social benefits, achieve equitable distribution, and form human capital or in order to obtain personal benefits, as spending on education contributes to the development of the human development process, because the educated person has a major role in development and his role is greater than the uneducated person, and that the National Human Development Report (2008) refers to the urgent priority that must be given to education mainly in building Human development strategy in society, as well as education is one of the main pillars that help develop human development, in addition to that, education contributes to increasing production and raising productivity, as the development of peoples' potential is through the education and development of the human element, (Al-Qusayr, 2017: 107) [17], and the development of indicators of spending on education in the Iraqi economy for the period (2005-2022) can be observed through the data of Table (1) as follows:

Table 1: Ratio of expenditure on education to total expenditure and GDP in Iraq for the period (2005-2022)

Ratio of Education Expenditure to GDP %	GDP at current prices (Million JOD)	Proportion of expenditure on education To total expenditure %	Expenditure on education (million dinars)	Total expenditure (million dinars)	Years
2.00	73533598.6	5.58	1472788.2	26375175	2005
2.15	95587954.8	5.29	2051914.3	38806679	2006
2.45	111455813.4	7.00	2728653.1	39031232	2007
3.15	157026061.6	8.32	4943189.8	59403374	2008
4.03	130643200.4	9.48	5267519.6	55589721	2009
4.08	162064565.5	9.44	6617860.1	70134201	2010
4.28	217327107.4	11.81	9300539.0	78757667	2011
3.36	254225490.7	8.11	8530552.7	105139575	2012
3.51	273587529.2	8.06	9597575.1	119127556	2013
3.64	266332655.1	8.35	9683126.8	115937762	2014
4.62	194680971.8	10.85	8988200.6	82813611	2015
4.92	196924141.7	13.15	9677943.0	73571003	2016
4.57	221665708.5	13.42	10128545.8	75490115	2017
4.65	254870184.6	14.66	11856906.3	80873200	2018
4.73	262917150.0	11.13	12430855.8	111723600	2019
3.97	198774325.4	9.29	7888929.2	84961342	2020
5.73	292997150.6	21.13	9738104.5	211523601	2021
4.97	199979825.4	10.29	11609941.8	94991349	2022

***Source*:** Prepared by the researcher based on the data of the Ministry of Planning, the Central Bureau of Statistics, the report on education, for the period (2005-2022)

It is clear from the data of Table (1) the evolution of indicators of spending on education, as spending on education is of great importance in achieving economic growth, as spending on education reached (1472788.2) million dinars during the year (2005) The ratio of spending on education to total public expenditure was (5.58%) for the same year, and then spending on education began to rise, as it rose in (2010) to (6617860.1) million dinars, as it reached its ratio to the total expenditure year (9.44%), and this increase is due to the population growth and their needs for schools, universities and education supplies to keep pace with the increase in the number of students, in addition to the increase in total public spending, while its ratio in (2005) to GDP (2.00%), and its ratio to GDP in (2010) was (4.08%), then spending on education began to rise from year to year, and the reason for this rise is due to the lifting of the economic embargo on Iraq and the return of export Oil positively affected the level of public spending, which led to an increase in the volume of spending on education, and the period (2014-2019) witnessed a fluctuation in public spending, so that spending on education fluctuated, and the reason for this is due to the security conditions witnessed by some governorates of Iraq in that period, and the accompanying military and other expenditures that led to an imbalance in the structure of public spending, while spending on education in (2020) decreased to (7888929.2) million dinars and constituted Its ratio to total public expenditure (9.29%), while its percentage to GDP (3.97%), and the reason for this decline is due to the increase in spending on the health sector of total spending due to the Corona pandemic that the country went through and to the decline in oil prices in global markets, and despite that, these ratios do not rise to the level that is reliable in achieving human development, so it is necessary to develop and improve educational services for the purpose of achieving the requirements of human development, and the form (2-9) shows the percentage of expenditure on education as a percentage of total expenditure and gross domestic product (GDP) as follows:



***Source*:** Researcher's work based on Table 1 data.
Second Theme: Theoretical and Conceptual Framework for Economic Growth.

Fig 1: Ratio of expenditure on education to total expenditure and to GDP in Iraq for the period (2005-2022)

The concept of economic growth: Before the industrial revolution witnessed by the world, there was no clear interest in the subject of economic growth, as life was characterized by simplicity, so society devoted most of its economic resources not the product of basic needs of food, clothing, housing and other basic needs for living, but after

the industrial revolution, economic growth began to take a large space to know the extent of development of countries (2006: 5, (Charles). Economic growth is defined as "the increase in real gross national product or GDP between two periods or is the rise in the rate of per capita income, which is the real national product divided by the number of inhabitants" (Al-Wadi, 2007: 331) [20] and economic growth is defined as the steady long-term increases in per capita national income. This means that if income increases, it must be faster than the increase in population in order for growth to be achieved. Michael, 1999: 455) [19].

- From the previous definitions of economic growth, we note that growth is a process of change in amounts characterized by being economic amounts and over a relatively long period of time, and therefore economic growth is characterized by three characteristics, Namely (Al-Amin, 2002: 371) [3]
- Economic growth is a process of continuity over a relatively long period of time.
- Economic growth includes a change in amounts characterized by economic amounts.
- Economic growth is dynamic in nature because it occurs over time.
- The concept of economic growth can be defined by the increase in the annual rate of production compared to the previous year, and when the population grows at the same rate of output growth, there is no economic growth and the per capita rate of output is the real indicator of economic growth and welfare (Al-Quraishi, 2010, 80) [15].

Types of economic growth: Economic growth includes the achievement of an increase in income or real national product over time, but it is characterized by the presence of three types of growth, which are as follows.

Transient growth

It is the type of growth in the economy that is emerging as a result of the emergence of some external or internal factors in the country and disappears with the disappearance of those factors in the sense that it lacks the character of stability and permanence, i.e. appears as a result of emergency conditions and factors that soon disappear and disappear with the growth that made it, this type of growth prevails in developing countries as it arises as a result of the availability of positive indicators adverse in their foreign trade as they fade quickly and as quickly as they appeared.

Automatic growth

This type of growth occurs spontaneously and naturally without prior scientific planning, as it usually occurs gradually and slowly, as the phenomenon of natural growth has occurred historically by moving from feudal society to capitalist society, that is, through objective processes, as the first process is summarized in the social division of labor through gradation from agriculture to the stage of handicraft and then the mechanism, followed by the process of initial accumulation of capital used in foreign trade to then turn into industry, which is this The second process, either the third, includes the wide spread of the production process, i.e. the sovereignty of commodity production, while the last process is a process of sovereignty and formation of the internal market in the sense of forming a local market where each output becomes a market in which supply and demand and this market constitutes the establishment of a national market, as this pattern is very flexible in developed capitalist countries.

Planned growth: This type of growth occurs as a result of comprehensive and scientific planning of the resources and needs of the country, as the strength and effectiveness of this type of growth is closely related to the capabilities of planners and the realism of the plans developed, as well as the effectiveness of implementation, follow-up and public participation in the planning process at all levels, in addition to that, the methods and studies of economic planning is a broad activity practiced by many countries and economic growth has become a goal sought by all countries of the world.

Third Theme: Singapore's Experience in the Field of Spending Policy on Education and its role in achieving economic growth

The development and reforms of education initiatives in Singapore: The educational system in Singapore during the British colonial era was characterized by the presence of local schools established by the three local groups that make up the community, namely Chinese, Malays and Indians, but they were under the direct supervision of the government, but independence from Britain in (1963) and separation from Malaysia in (1965) carried with it the winds of change that made the government realize that the educational system is the most important plan for upbringing and social engineering in the country, so unremitting efforts were made to replace local schools. The aim was to encourage the largest number of students to upgrade the mother tongues to the level of the first language (Abu Ghazaleh, 2020: 19) [1], and to adopt a unified curriculum for all schools in the country, provided that each educational institution teaches the curriculum in the language it wants, and all schools have adhered to the government's decisions, the country's political leadership during this stage started from an idea aimed at reducing The linguistic rift between the different ethnic groups in the country through the adoption of a unified language, the English language, because it reached the conviction that the linguistic conflict carries within it a conflict that can be exploited politically, which pushes the different groups of society to withhold themselves in all respects, and with the government's awareness of the difficulty of mastering two languages with the same efficiency, a new phase of reforming the educational system began in the year (1979) by taking steps (Ishii, 2006: 51) [4] The division of students who are at the age of nine in the third year of primary school into three levels: normal, comprehensive and monolingual according to their academic results, and under this classification did not have students belonging to the level of monolingual education who were seen as less scientifically competent than their counterparts at other levels to study their mother tongues as subjects. Compulsory exams in English and Mandarin Chinese for students wishing to enroll in secondary school Establishment of a number of Independent schools and granting them self-management and upgrading the level of Chinese schools by raising the level of English in them in application of the private support project, but this measure was rejected by Muslim private schools, which viewed it as a threat to their existence and existence, which prompted the government to put forward another project called immersion

classes based on the idea of integrating students coming from Chinese schools in national schools that teach their curriculum in English, but the officials of these schools rejected the project, justifying their stand against Lee Kuan Yew, who later succeeded in generalizing the experience to private schools in Singapore, responded firmly to the opponents of his project by saying that the process of immersion may delay their classes for three or four months, but it is a social responsibility that we must all bear in order to help each other.

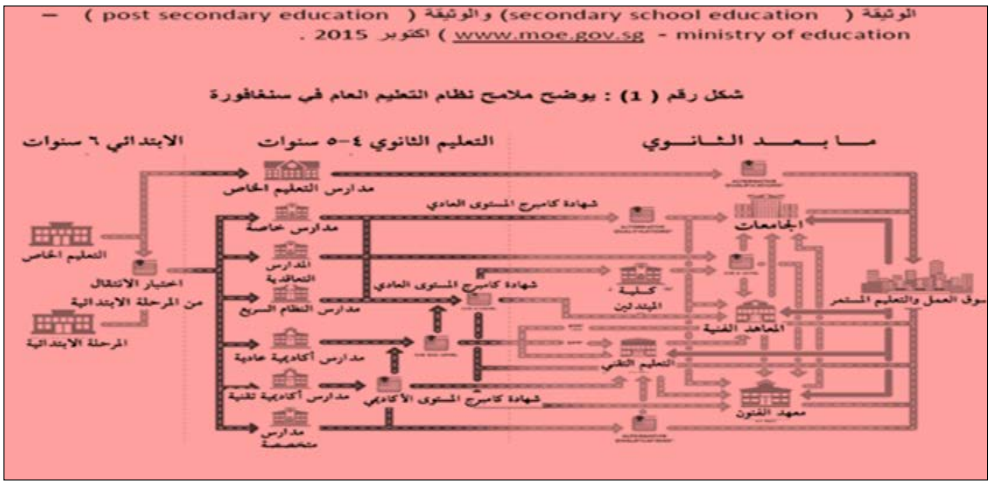


Fig 2: Shows an overview of the landscape of Singapore's education system as shown in

The reflection of education policy in Singapore on economic growth: Education is the main channel to provide the labor market with multiple skills and develop acquired skills, so it indirectly contributes to pushing the country's economic growth process and accelerating its pace, hence the idea of investing in education as an investment commodity and not a consumer, so the economic factor is one of the most important factors affecting educational policy negatively and positively, as it has a major role in determining education budgets to the extent that education planning depends on indicators The horizontal and vertical expansion of education, the level of teacher preparation, the health care and nutrition of pupils, educational research and other aspects of the educational system depend on the economic factor determining the amount of money allocated to education. The interrelationship between economics and education can be determined by the following points (Sean, 2009, 41) [13].

1. The higher the rate of economic development, the higher the education budget, which helps to spread education and improve its level and vice versa.
2. The economic factor is the pillar on which the expansion of education rests.
3. It is the economic factor that provides employment opportunities for educated labor and is therefore a major source of income.
4. Education is the way to prepare the educated and trained manpower needed to achieve economic growth.
5. The more people earn as a result of economic development, the higher the aspirations for higher and higher levels of education.
6. The more economic development is achieved, the more jobs and better the wage rates.
7. Economic activities are a pressing force towards the demand for education.

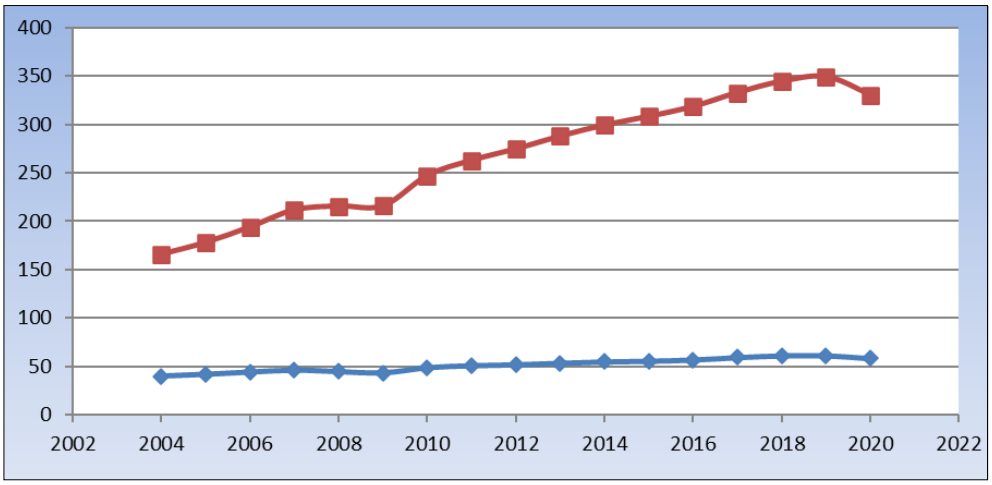
Accordingly, the economy has a limited value if it is not harnessed for progress and development through education, which in turn is the way to the numbers of manpower necessary to develop the economy, so planning for education and its policy is a pillar and pillar at the heart of this planning and not a complementary activity to economic planning, and despite the pursuit of educational bodies in schools and universities to provide balanced educational and educational services, but policymakers and employers are keen to adapt the process of education and training with the country's economic needs. But the marriage between the education output on the one hand and the requirements of development and employment on the other is no longer easy due to economic change and rapid dedication (Hajji, 2012: 56) [7].

GDP per capita in Singapore: As shown in Table (2), Singapore's per capita GDP in 2004 amounted to about (39.79) thousand US dollars, which is the lowest share achieved during the period (20020-2004) and a gross domestic product of (165.79) billion dollars, then the output achieved relative stability during the years 2008 and 2009 amounted to (215.48 and 215.74) billion dollars, respectively, with two growth rates declining from (1.86%) to (0.12%). The per capita output also declined from (44.52) thousand dollars in (2008) to (43.25) thousand dollars in (2009) with a negative growth rate of (-2.85%), as the signs of the global financial crisis, but soon the per capita recovery achieved a high increase in 2010 by (48.66) thousand dollars and a growth rate of (12.51%) and then continued to increase as the per capita reached (61.17) thousand dollars, It is the highest share achieved per capita during the study period in (2019), then decreased in (2020) and the reason for that decline was the repercussions of the (Covid-19) pandemic as shown in Table (2) and Figure (3).

Table 2: Evolution of Singapore's GDP per capita for the period (2004-2020)

growth rate	GDP per capita (thousand dollars)	Total Population (million inhabitants)	growth rate	Gross Domestic Product (GDP) (billion dollars)	السنة
-	39.79	4166664	-	**165.79**	**2004**
4.86	41.72	4265762	*6.85*	177.99	2005
5.64	44.08	4401365	9.00	194.02	2006
4.55	46.09	4588599	9.02	211.53	2007
3.41-	44.52	4839396	1.86	215.48	2008
2.85-	43.25	4987573	0.12	215.74	2009
12.51	48.66	5076732	12.68	247.08	2010
4.14	50.68	5183688	6.33	262.74	2011
1.92	51.66	5312437	4.46	274.46	2012
3.15	53.29	5399162	4.83	287.74	2013
2.59	54.67	5469724	3.93	299.07	2014
1.44	55.46	5535002	2.98	308.00	2015
2.33	56.75	5607283	3.33	318.26	2016
4.42	59.27	5612253	4.51	332.64	2017
3.01	61.05	5638676	3.49	344.28	2018
0.19	61.17	5703569	1.344	348.91	2019
5.09-	58.05	5785807	5.39-	330.10	2020
	2.39	2.07		4.40	Compound growth rate)%)

***Source*:** Prepared by the researcher based on:
World Bank national accounts data available on the site:
https://albankaldawli.org/country/Singapore.
OECD National Accounts Division data, available at
https://www. Oced.library.org>agric.
Growth rates and compound growth were calculated by the researcher



***Source*:** Prepared by the researcher based on the data of Table (2)

Fig 3: Singapore's GDP per capita (2004-2020)

Fourth Theme: The results of measuring spending on education and its impact on the average per capita GDP in the Iraqi economy for the period (2005-2022)

1. **Characterization and formulation of the standard model used in the research:** The standard model is the general framework that includes all the concepts and theoretical foundations that are based on the reality of the relationship between the variables under research, which are selected according to the economic theory that clarifies the expected relationships between the variables of the quantitative model, and the first step in order to study any standard model is to collect information and determine the dependent variables and independent variables that must be included in the model, where the description of the standard model is based on mathematical content in which the relationships between The economic variables studied in the form of standard models by which the data of the variables under consideration can be tested to measure their parameters for analysis and interpretation and present their results as economic problems in a standard framework.
2. **Economic variables used in the research:** The research included an independent variable and a dependent variable that was addressed in the research by the theoretical side depending on what came from the economic theory of the proposals of schools of thought and economic experimental studies, and in order to test the hypotheses of the research and achieve its objectives, the independent variable was determined Spending on education in the Iraqi economy and dependent Average per capita GDP and Table (1) shows the variables and data used in the estimated standard model

Table 3: Description of research variables and data used in the standard side

Characterization	Variable	Code	Name of variables	characterization	For variable	code	Name of variables
تابع	Y	APCGDP	Average GDP per capita	Independent	X1	SON	Spending on education
2629.66							1472788.2
3317.83							2051914.3
3754.99							2728653.1
5135.29							4943189.8
4125.86							5267519.6
5001.96							6617860.1
6567.99							9300539.0
7538.15							8530552.7
7975.22							9597575.1
7648.99							9683126.8
5528.73							8988200.6
5444.54							9677943.0
5968.46							10128545.8
6685.26							11856906.3
6719.43							12430855.8
4950.77							7888929.2
5649.38							9738104.5
6312.49							11609941.8

***Source*:** Researcher work Based on the theoretical framework of the study, it is assumed to test the following functional relationship

Yi = a + b1X1 ui **……..……**

Whereas:
Y: represents the symbol of the average per capita income of the dependent GDP, while (X1): It symbolizes spending on independent education, and the research period extends from (2005-2022), which is a short period that is not enough to conduct modern standard methods, so the data was converted into quarterly data, as the (12 Eviews) program provides the possibility of converting data from annual to quarterly.

The results of stability tests for research variables.
We will test the stability of the research variables using the statistical program (2 Eviews1) in order to find out whether the search variables (stable or unstable) and by that we mean whether they contain the root of the unit or not, with the determination of the rank of integration, where the detection of the stability of the research variables under study is very important in estimating standard models, in order to get rid of the problem of pseudo-regression when estimating, in addition to that, stable time series can get rid of the shocks they encounter and then return To the state of equilibrium in the long term, so we will use unit root tests and time series graph to verify the stability of time series, and after performing these tests we obtained the following results from the standard program (2Eviews1):

Table 4: Results of the unit root test (Phelps-Perron-PP test) for search variables at the original level of data

Unit Root Test Results Table (PP)			
Null Hypothesis: the variable has a unit root			
	At Level	APCGDP	SON
With Constant	t-Statistic	-2.2243	-1.7839
	Prob.	*0.1998*	*0.3854*
		n0	n0
With Constant & Trend	t-Statistic	-1.8768	-1.8498
	Prob.	*0.6556*	*0.6693*
		n0	n0
Without Constant & Trend	t-Statistic	0.4020	1.0133
	Prob.	*0.7968*	*0.9167*
		n0	n0
Notes: a: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1% and (no) Not Significant			

Source: Preparation of the researcher based on the outputs of the standard program (EViews12).

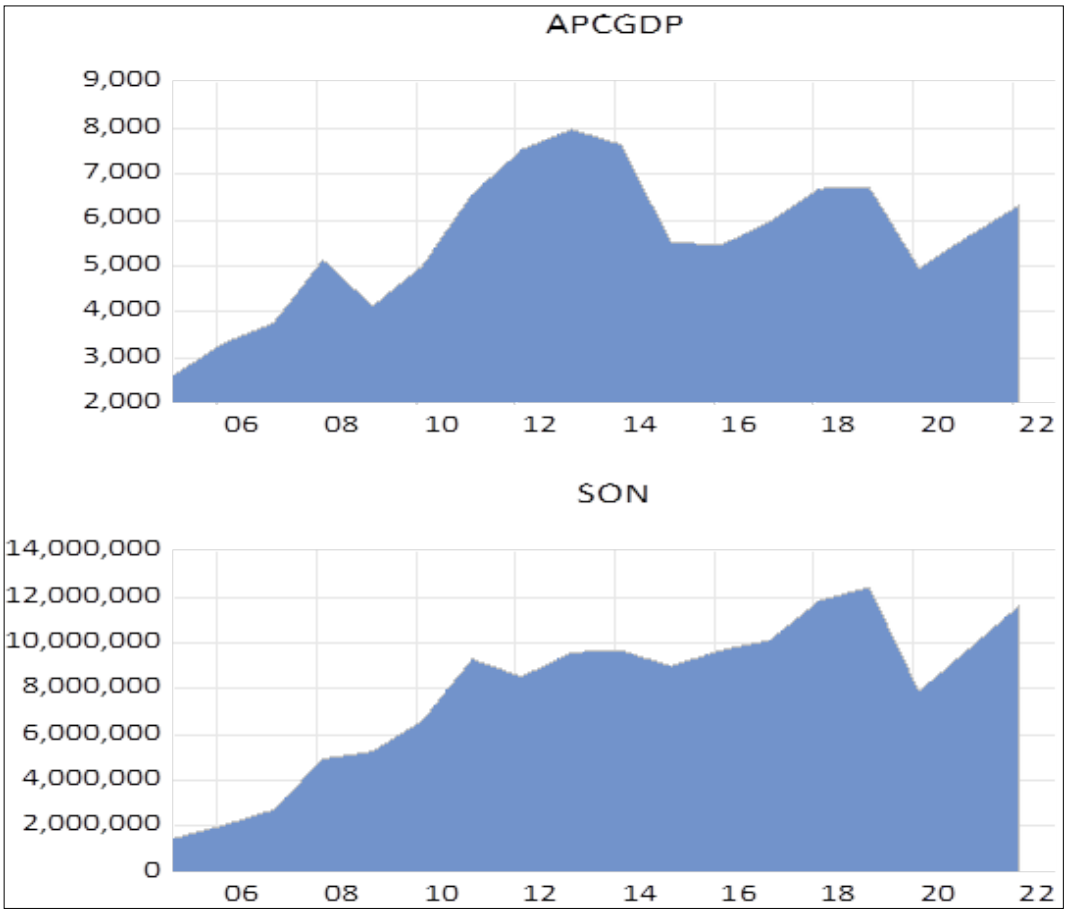


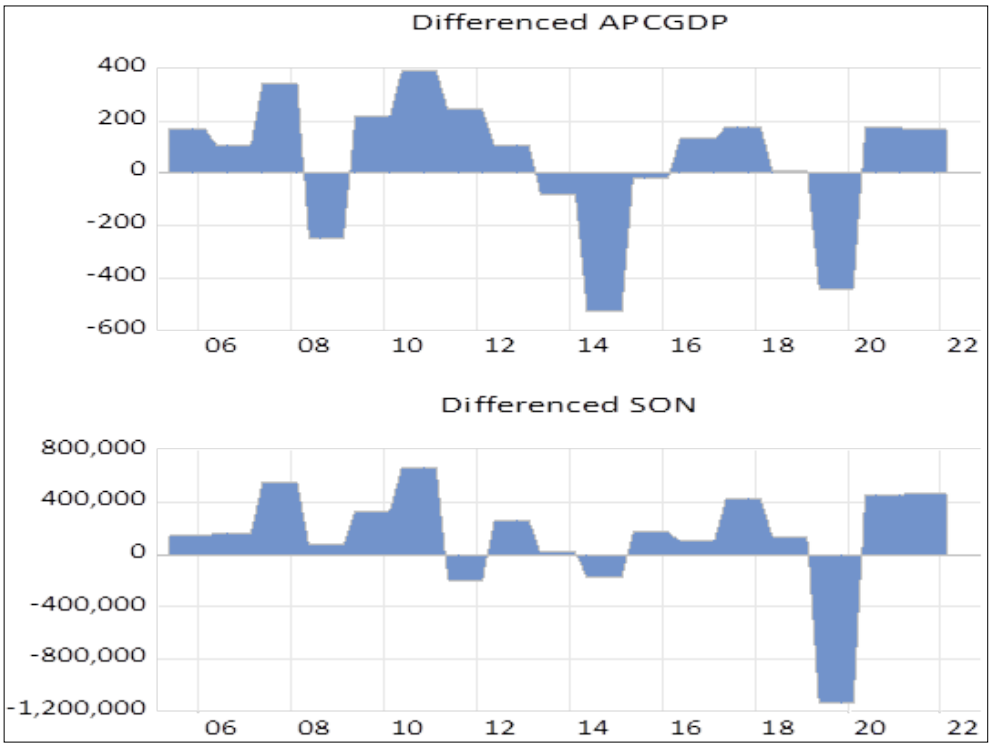
Fig 4: Graphs of the results of stability tests for the variables in question at the original level. Source: Prepared by the researcher based on the outputs of the standard program (12) Eviews.

We note from the results of Table (2) and graphs (1) for the results of the stability test for the variables in question, that the dependent variable is unstable at the original level as well as the independent variable is unstable at the original level of the data under research and according to the Phelps Perron test (pp), and since all the variables under research are unstable, the first difference was taken as in Table (3).

Table 5: Stability tests for search variables at the first difference of data

At First Difference			
		d(APCGDP)	**d(SON)**
With Constant	t-Statistic	-3.0515	-3.5054
	Prob.	*0.0353*	*0.0108*
		**	**
With Constant & Trend	t-Statistic	-3.0804	-3.5280
	Prob.	*0.0018*	*0.0444*
		***	**
Without Constant & Trend	t-Statistic	-2.9938	-3.2286
	Prob.	*0.0033*	*0.0016*
		***	***
Notes: a: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1% and (no) Not Significant			

Source: Prepared by the researcher based on the outputs of the standard program (12Eviews).



Source: Prepared by the researcher based on the outputs of the standard program (12) Eviews.

Fig 5: Graphs of the results of stability tests for the variables in question at the first difference.

We note through Table (3) as well as the graphs (2) of the results of the stability test for the variables in question, that the independent and dependent variable became stable when taking the first difference according to the Philippis Perron test (pp), and therefore it is preferable to use the self-regression method with distributed slowness (ARDL) because the variables stabilized at the first difference in addition to the number of observations is small.

Fifth Theme: The relationship between spending on education and the average per capita income of Gross domestic product in the Iraqi economy for the period (2005-2022).

1. **Preliminary estimate of the (ARDL) model:** Table (6) shows the results of the preliminary estimate of the (ARDL) model, which shows the relationship between spending on education and the average per capita income of GDP in the Iraqi economy for the period (2005-2022).

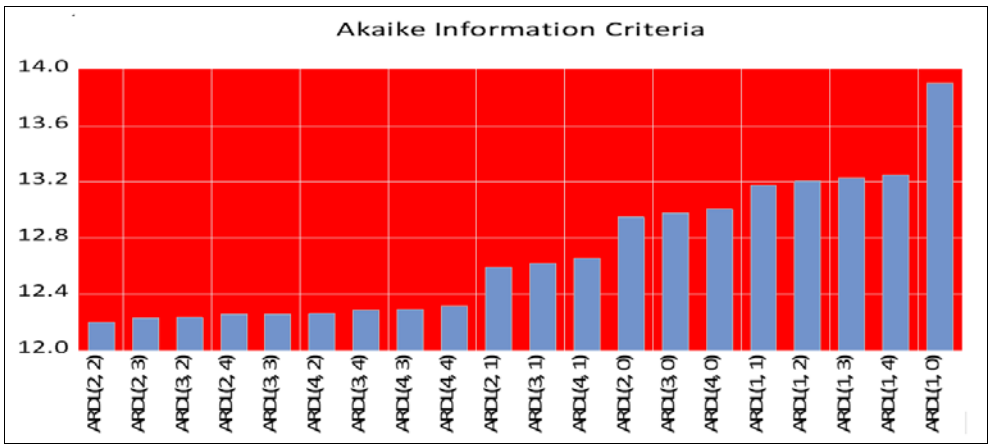
Table 6: Preliminary Estimation of the ARDL Model Relationship between Education Expenditure And between the average per capita GDP in the Iraqi economy.

Dependent Variable: APCGDP				
Method: ARDL				
Sample (adjusted): 2005Q4 2022Q1				
Selected Model: ARDL(2, 2)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
APCGDP(-1)	1.761865	0.075923	23.20598	0.0000
APCGDP(-2)	-0.801934	0.075999	-10.55186	0.0000
SON	0.000410	4.57E-05	8.965136	0.0000
SON(-1)	-0.000716	8.98E-05	-7.975108	0.0000
SON(-2)	0.000319	5.64E-05	5.656645	0.0000
C	118.1936	59.39519	1.989953	0.0511
R-squared	*0.86*4273	Mean dependent var		5745.902
Adjusted R-squared	0.9*0*3804	S.D. dependent var		1291.136
S.E. of regression	101.6351	Akaike info criterion		12.16594
Sum squared resid	630111.0	Schwarz criterion		12.36338
Log likelihood	-401.5590	Hannan-Quinn criter.		12.24407
F-statistic	2118.050	Durbin-Watson stat		1.955001

Source: Prepared by the researcher based on the outputs of the standard program (12Eviews).

We note from Table (6) the results of the preliminary estimation of the (ARDL) model, which shows the relationship between spending on education and the average per capita GDP in the Iraqi economy for the period (2005-2022), where it is clear from the table that the coefficient of determination (R^2 reached (0.86), which gives explanatory power to the studied model, that is, the independent variables explain (86%) of the changes that occur in the dependent variable, while the remaining percentage of (14%), represents the effect of other variables that did not

enter Within the model, the value of (D.W) indicates that there is no correlation between the study variables, and the results of Table (4) and Figure (3) show that the appropriate self-regression model with distributed slowness (ARDL) is (2.2) to measure the relationship between spending on education and the average per capita GDP in the Iraqi economy for the period (2005-2022).



Source: Preparation of the researcher based on the outputs of the standard program (12Eviews).

Fig 6: Test results according to the AIC standard to determine the best model.

Results of the Bounds Test for Joint Integration: In order to test the long-term equilibrium relationship between spending on education and the average per capita GDP in the Iraqi economy for the period (2005-2022), it is necessary to conduct a boundary test (joint integration) through the following table:

Table 7: Test of the results of the tests of the limits between spending on education and the average income share per capita of GDP in the Iraqi economy for the period (2005-2022).

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	5.571355	10%	3.02	3.51
k	1	5%	3.62	4.16
		1%	4.94	5.58

Source: Preparation of the researcher based on the outputs of the standard program (12 Eviews).

It is inferred from Table (5) that the value of his calculated statistics (F-statistic) amounted to (5.57), which is greater than the tabular value at a significant level less than (5%), which means rejecting the null hypothesis (H_0 which states that there is no long-term equilibrium relationship between the variables, and accepts the alternative hypothesis (H_1 which states that there is a common integration relationship between the variables in the model used during the research period, which means that there is a long-term equilibrium relationship that goes from the explanatory variables towards the dependent variable). This necessitates an assessment of the short- and long-term response.

1. **The results of estimating the long-term and short-term relationship and the error correction parameter:** After conducting the boundary test and making sure that there is a long-term equilibrium relationship between the dependent variable and the independent variable, and therefore the long-term parameters and the error correction coefficient must be estimated based on the standard program (12Eviews), and Table (8) shows those results that confirm the existence of a common integration relationship between the dependent variable and the independent variable, and this is confirmed by the coefficient of the error correction vector CointEq(-1) for this adult model (-0.0400) and that the probability value associated with it is (0.0007), and this achieves the two basic conditions in this coefficient, namely its negative value and its statistical significance.

Table 8: Results of Estimating Long-Term and Short-Term Response According to ARDL Model for the Relationship between Expenditure on Education and between the average per capita GDP in the Iraqi economy for the period (2005-2022)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	118.1936	59.39519	1.989953	0.0411
CointEq(-1)*	-0.040069	0.016103	-2.488276	0.0007
SON(-1)	1.31E-05	7.27E-06	1.803233	0.0763
D(APCGDP(-1))	0.801934	0.075999	10.55186	0.0000
D(SON)	0.000410	4.57E-05	8.965136	0.0000
D(SON(-1))	-0.000319	5.64E-05	-5.656645	0.0000
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
SON	0.000327	0.000110	2.979248	0.5441
C	2949.718	959.2597	3.074994	0.0031

***Source*:** Preparation of the researcher based on the outputs of the standard program (12Eviews).

Table (8) shows the results of estimating the long-term response according to the (ARDL) model for the relationship between spending on education and the average per capita GDP in the Iraqi economy for the period (2005-

2022) as follows:

1. The error correction parameter indicates a long-term equilibrium relationship between spending on education and the average per capita GDP in the Iraqi economy for the period (2005-2022) and this is confirmed by the CointEq error correction vector coefficient (-1) for this adult model (-0.0400) and that the probability value (Prob) associated with it is (0.0007)), and this achieves the two basic conditions in this coefficient, namely its negative value and its statistical significance, because the error correction parameter is negative and significant at a lower level (1%), as the parameter indicates the return to the balance during (-0.0400) of time.
2. The results of the long-term response show a weak direct impact, as spending on education exerts a weak direct impact on the average per capita GDP in the Iraqi economy for the period (2005-2022) and this applies with the reality of the Iraqi economy, but does not apply with the reality of economic theory, meaning that the increase in spending on education works on a weak increase in the average per capita income of GDP during the research period, and the reason for this is due to the lack of wise and capable leadership To overcome and solve difficulties and provide the appropriate atmosphere for the development of education has contributed significantly to making it one of the most undeveloped educational systems in the world, and for this reason, the situation of education in Iraq is still modest, especially since the outputs of education have not been properly employed, which has a role in achieving economic growth, as well as the large number of non-sober private colleges whose outputs have no role in achieving economic growth.
3. **The results of the autocorrelation test and the heterogeneity test:** Table (7) shows the results of the autocorrelation test and the instability of the homogeneity of the variance of the relationship between spending on education and the average per capita GDP in the Iraqi economy for the period (2005-2022) as follows.

Table 9: Results of the self-correlation test and the instability of the homogeneity of the variation of the relationship between spending on education and the average per capita GDP in the Iraqi economy for the period (2005-2022)

Heteroskedasticity Test: Harvey			
F-statistic	4.877644	Prob. F(*5,61*)	0.0039
Obs*R-squared	12.81598	Prob. Chi-Square(3)	0.0051
Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.*9*16389	Prob. F(2,69)	0.8903
Obs*R-squared	*1*.252168	Prob. Chi-Square(2)	0.8815

Source: Preparation of the researcher based on the outputs of the standard program (12Eviews).

It also appears from Table (7) that the estimated model is free of the problem of autocorrelation and the instability of the homogeneity of variance because the calculated test values show that it is not possible to reject the hypothesis of nothingness.

Sixth Theme: Analysis of Standard Results between Economic Theory and the Reality of the Situation in The Iraqi economy and the Singaporean experience / explanation of the reasons and a strategic vision.

Despite the achievements made in the field of quantitative expansion in education, the status of education in Iraq is still modest compared to the achievements of other countries, even in the developing world due to financial and administrative corruption, and its march has witnessed great fluctuations as a result of the exceptional circumstances that the country went through during the research period, which led to the obstruction of the educational process in Iraq, while education is the main channel to provide the labor market with multiple skills and develop the acquired skills, so it is poured in a way that is not Directly in pushing the economic growth process of the country and accelerating its pace, hence the idea of investing in education as an investment commodity and not a consumer, so the economic factor is one of the most important factors affecting educational policy negatively and positively, as it has a major role in determining education budgets to the extent that education planning depends on economic indicators to a large extent. While the results of the long-term response that were tested in the standard side show a weak direct effect, as spending on education exerts a weak direct impact on the average per capita GDP in the Iraqi economy for the period (2005-2022) and this applies with the reality of the Iraqi economy, meaning that the increase in spending on education works on a weak increase in the average per capita GDP during the research period, and this does not accelerate the pace of the economic growth process. For the country, this does not apply with the reality of economic theory, due to the lack of wise leadership capable of overcoming and solving difficulties and providing an appropriate atmosphere for the development of education, has contributed significantly to making it one of the worst educational systems in the world.

While when compared with Singapore, we find that Singapore from an early age has invested its human resources to develop the country, so it has directed attention to the education sector, education and development complement each other, as investment in education has contributed over several years to the development of the Singaporean economy and made it one of the strongest economies in Asia and the world, and despite the obstacles faced by educational policies in Singapore, the presence of wise leadership capable of overcoming and solving difficulties and providing the appropriate atmosphere for the development of education has Singapore is classified as one of the most high-income countries per capita due to the availability of many sources of income in it, according to the London Report of Global Financial Centers for 2018, it is the fourth most important financial center in the world, (Singapore is the secret of success, interviews published on the Al Jazeera http://www.aljazeera.net website).

Attention must be paid to the development of human capabilities through the development of the education sector, as well as benefiting from Singapore's experience in urging further development of education, which in turn contributes to raising the level of economic growth in developing countries, including Iraq. It will present Singapore's experience as a pioneering experience that has proven successful globally, by shedding light on the difficulties and challenges it has faced, and addressing the reasons why a small developing country like Singapore has progressed and moved from Third World countries to a modern state. Classified as one of the Asian tigers, how did

Singapore, just a small island in Southeast Asia with no natural resources, become one of the most developed countries in the world? How has its system of government and policy architecture created the world's most important economies and societies in just a few decades? What is the secret secret behind Singapore's success? Through a unique combination of policies that prioritize meritocracy, competence, and merit over any other, Singapore has developed an equitable education system for all, and an advanced public civic service that ensures effective government action, raises national productivity, and achieves sustainable development.

Conclusions

1. Education has a big role in developing the economy in many countries and we do not find this role for education in developing the economy in Iraq while education had a big role in developing the economy in Singapore
2. The wise leadership has a role to play in accelerating the country's development, as was evident in Singapore.
3. Economic growth in any country does not depend only on economic resources, but other resources that must be exploited, such as the development of the human mind, and this was evident in the Singaporean experience, which was not exploited in Iraq.

Recommendations

1. Urging increased attention to education in Iraq in order to develop human capabilities and provide the Iraqi economy with expertise that has a role in developing the Iraqi economy and raising the level of productivity in the economy.
2. The wise and wise leadership has a role in accelerating the development of the country, as was evident in Singapore, so Iraq must benefit from the Singaporean experience and choose the right person in the right place in order to develop education.
3. The Iraqi economy is a renter economy, so the Iraqi economy must diversify economic resources, and there are also other resources that must be exploited, such as the development of the mind, because economic growth in any country does not depend only on economic resources, but on how these resources are managed.

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