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**PRIVATE EDUCATION EFFICIENCY AND  
EFFECTIVENESS FROM THE PERSPECTIVE OF  
QUADRANT MODEL (SWOT) USING LINEAR  
REGRESSION"CASE STUDY SAUDI ARABIA"**

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**Abstract**

The general education in Saudi Arabia has received the priority of government work. Education has received considerable attention since the establishment of Saudi Arabia. Among the means by which to develop education is to enter the private sector in investment projects in the field of education by establishing private schools to contribute to bridging educational gaps and developing curricula, methods and teaching methods to be attractive to students. The wealth that has been achieved for some members of society, making them search for different types of education for their children, regardless of the fees they pay for this. Objectives of the study: The study aimed to:

highlight the role of special education in the educational and cognitive process. contribute to the development of educational curricula and provide the community with cadres capable of bringing about positive change.the advancement of society intellectually and knowledgeable.

**Keywords:** Private Education, Quadrant model, linear Regression

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## كفاءة التعليم الخاص وفاعليته من منظور نموذج التحليل الرباعي (SWOT) باستخدام الانحدار الخطي "دراسة حالة المملكة العربية السعودية"

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العربية السعودية

### الملخص

حصل التعليم العام في المملكة العربية السعودية على أولوية العمل الحكومي. كما حظي التعليم باهتمام كبير منذ إنشاء المملكة العربية السعودية. من بين الوسائل التي يمكن بها تطوير التعليم دخول القطاع الخاص في المشاريع الاستثمارية في مجال التعليم من خلال إنشاء مدارس خاصة للمساهمة في سد الفجوات التعليمية وتطوير المناهج والأساليب وطرق التدريس لتكون جذابة للطلاب. الثروة التي تحققت لبعض أفراد المجتمع، مما يجعلهم يبحثون عن أنواع مختلفة من التعليم لأبنائهم، بغض النظر عن الرسوم التي يدفعونها مقابل ذلك.

أهداف الدراسة: تهدف الدراسة إلى: تسليط الضوء على دور التربية الخاصة في العملية التعليمية والمعرفة-المساهمة في تطوير المناهج التعليمية وتزويد المجتمع بالكوادر القادرة على إحداث تغيير إيجابي - النهوض بالمجتمع الفكري والمعرفي.

الكلمات المفتاحية: التعليم الخاص، نموذج رباعي، الانحدار الخطي.

**Introduction:** Education is generally one of the most important factors of development in societies and is the most effective and influential tool in the process of development and the human element and is the only means of movement of progress and development. The true measure of the progress of societies is not only their natural resources or resources, but also the human resources they possess, the knowledge and the ability to exploit these resources better so that they can achieve the well-being of society. No society can achieve progress, development and prosperity unless it has the knowledge of development and will not acquire this knowledge without the existence of educational institutions with the ability of software and knowledge and high cadres of a high degree of qualification. Therefore, education is the most important in all systems and societies, but it is the first concern because it helps to build the human and show its features and the establishment of values and elements and intellectual and religious aspects of the individual and the community on which the construction of the integrated personality. Private education is the investment of the private sector in education and is an important means of benefiting from the material and knowledge resources of individuals and institutions in society in building and developing the nation. In this paper we discuss the potential of private schools and the efficiency and effectiveness of the positive contribution to society by using quadrant analysis and linear programming as a measure to identify the problems, obstacles and methods used in the educational process in Saudi Arabia as a model for this study.

### **Problem Formulations:**

The problem of the study lies in the main question: Does private education have the ability, efficiency and effectiveness to make an appreciable contribution to the learning process?

questions of the study:

1-Is there a real opportunity for private education to prove its distinctiveness from government education?

2-Does private education have the power and efficiency to make a real educational revolution?

3-Does private education contribute to the development of societies?

### **The Significant of study:**

The importance of the study is that it attempts to highlight the role of private education in society and how to benefit from it in bridging the gaps and gaps that occur in public education and contributing to the development of the curriculum with the freedom to introduce additional study courses and the use of advanced teaching methods.

### **Objectives of the study:**

The study aimed to highlight the role of special education in the educational and cognitive process and contribute to the development of educational curricula and provide the community with cadres capable of bringing about positive change and the advancement of society intellectually and knowledgeably.

### **The hypothesis of the study:**

1-Special education has the opportunity to make a positive change in curricula and teaching methods.

2-Private education is considered a form of investment

3-Special education does not have the competence and effectiveness required to make any positive differences in society.

4-Private education represents another bourgeois window representing a kind of social prestige.

**Methodology of the study:**

The historical, descriptive, and deductive approach.

**The limits of the study:**

Place of study: Saudi Arabia.

Study time: The period from 1433 to 1438 AD.

**The first topic: The concept of education in the Kingdom and its departments**

**The first requirement : The concept of education in the Kingdom.**

- 1- **The concept of education :** Education in the language origin of the act science, and science against ignorance, and the man of the world and the knowledge of the people of scientists in all of them, and Siboyeh that scientists are the ones who say only science, and confirms the son of the Genie that the world in science is the one who possesses the greatness in science, but who was at the beginning In the request of knowledge or the beginning of his entry into the request for knowledge, he is considered a scholar, and the flag or the sign is a recipe for exaggerating the description of the person with science, which is the world too.

**2- Education in the Kingdom:**

The general education in Saudi Arabia has received the priority of government work. This interest has been preceded by any other interest as a practical application to invite the Islamic religion to mankind by making education a means for the ages and building of the earth. The meeting of the founder King Abdul-Aziz bin Abdul Rahman Al Saud, may God have mercy on him, E is a key tool for the start of education.

In 1344H, the establishment of the first apparatus of a modern educational institution and the first nucleus of a modern educational system was established. The approval of the establishment of the Directorate of Knowledge was issued on 13 Ramadan 1344H.

His Majesty King Abdul-Aziz, issued in 1345 H that "public knowledge matters are the spread of science, knowledge and industry and the opening of offices, schools and scientific institutes throughout the Kingdom of Hijaz.

This was the case until Saudi Arabia was declared the official name of the state in 1351H. The Basic Law of Knowledge was promulgated in 1356 H. The previous article was amended to be more comprehensive, as stated in Article 3 of the Law: The Directorate of General Knowledge is the supervisor of all education in the Kingdom of Saudi Arabia and excludes military education ".

The year 1373H was the starting point for formal education in Saudi Arabia, and the stage of rooting and expansion. This year saw the establishment of the Council of Ministers, which was one of the pillars of the Ministry of Education - the Ministry of Education now - where Prince Fahd bin Abdul-Aziz was the first minister to assume it and he took the reasons for achieving the factors of rooting and expansion. The Ministry took Makkah Al-Mukarramah headquarters from its establishment until the first spring in 1376 AH when it moved all its apparatus to Riyadh.

### **The Second topic: Private Education (Al Ahli) in the Kingdom:**

National security is linked to education, so there is a necessary requirement to change the common perception in many literatures that education is a service activity to an investment activity. Investment also plays a positive role, and raise the rate of economic growth and improvement, and investment operations correctly contribute to increased interdependence between the economic sectors to achieve continuous and growing development

In any modern society, the school is the center of hope for growth and development. The school in particular, and the educational system in general, are the most important institutions to which the arrows of criticism are directed in every society, especially when society is shaken or challenged. Criticism increases with the progress of society in urbanization and civilization. And this is only because the school is a tributary of the foundations of the tributaries of any society and its well-being and development.

Education has received considerable attention since the establishment of Saudi Arabia. This interest continued to the present years. One indicator of this concern is the allocation of education from the State budget. Education in Saudi Arabia has witnessed an unprecedented development in the world, in terms of the spread and absorption of students and free education and encourage enrollment. However, over time, problems have emerged in the educational system, such as the low level of student achievement, with a large proportion of them having low ratings in mathematics, English and Arabic, as indicated by the State of Education Report for the academic year 1426/1427 (General Administration of Educational Supervision, 1427), and the emergence of signs of deficiencies and imbalances in that system to keep abreast of developments and meet the development needs in Saudi Arabia and the world .With the emergence of indicators of low performance of the educational system, many specialists called for the need to work on the development of this system, and the introduction of educational projects development that enables education in Saudi Arabia to compete with educational systems in the rest of the world. These calls were met by a response from the political leadership, and the development of education became a national project .Among the means by which to develop education is to enter the private sector in investment projects in the field of education by establishing private schools to contribute to bridging educational gaps and developing curricula, methods and teaching methods to be attractive to students.

Therefore, with the availability of public education, there is special education (private), usually in private schools, additional subjects or programs, such as English or computer. According to the Ministry of Education, 1429, 9% of schools are private schools. Many private sector institutions invest their activities in public education programs. The private public schools are divided into two categories:

- 1-Schools that are not intended for financial gain, such as charity schools.
- 2-Schools that aim to achieve financial profits.

The Sixth Development Plan also indicated that private sector investment in education is:

- 1-Transport services in the public sector.
- 2-Construction of school buildings for public schools.
- 3-Investment in training.
- 4-Investment in the field of computer technology.

According to statistics of the Ministry of Economy and Planning (2006), the number of male and female students in Saudi Arabia increased by the end of the Seventh Development Plan to 296,903 students as in Table 1 and Figure 1.

**Table (1): Numbers of male and female students in KSA**

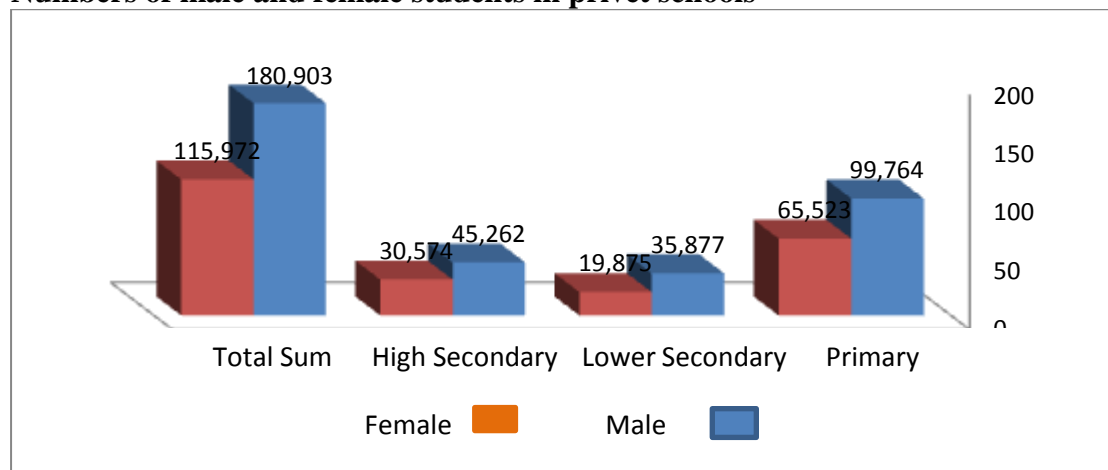
Stage	Male Students	Female Students
Primary	99.764	65.523
Lower Secondary	35.877	19.875
High Secondary	45.262	30.574
Total Sum	180.903	115.972
	296.875	

**Source: Ministry of Economy and Planning (2007)**

The table (1) shows that the percentage of students enrolled in special education represents 7% of students in the three stages.

**Figure No. (1)**

**Numbers of male and female students in privet schools**



The private sector expanded investment in education, as follows:

1. The large facilities that the state provides to private institutions, as well as the subsidies that the state provides to these schools.
2. The security and stability experienced by the Kingdom of Saudi Arabia is the motivation for those with funds to invest in education.
3. The high educational level of many citizens, which created a group interested in choosing schools suitable for their children.
4. Some private schools offer some services that may not be available in public schools.
5. The great economic growth in the Kingdom of Saudi Arabia, and the accompanying development in various fields, which made many residents see the

opportunity to work for them in the Kingdom, which led many of them to enroll their children in private schools.

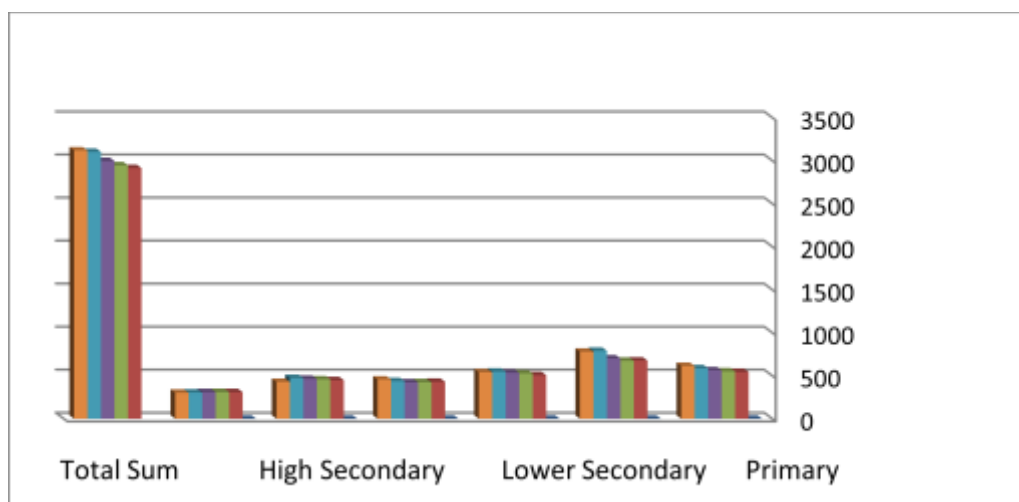
6. The wealth that has been achieved for some members of society, making them search for different types of education for their children, regardless of the fees they pay for this.

**Table No (2): Private Schools in the Kingdom of Saudi Arabia sorted by Stage, Gender and Years**

Years	Primary		Intermediate level		Secondary		Total
	Male	Female	Male	Female	Male	Female	
1434/1433	544	676	506	430	448	309	2913
1435/1434	551	674	527	425	458	310	2945
1436/1435	563	701	535	423	464	309	2995
1437/1436	586	789	548	437	473	304	3101
1438/1437	613	779	540	456	428	302	3118

Source: Ministry of Education

**Figure No. (2)  
Numbers of privet schools in KSA**



	1434/1433
	1435/1434
	1436/1435
	1437/1436
	1438/1437

It observed through Figure and Table (2) according to the statistics of the Ministry of Education for private schools from 1433-1433 the number of schools increased from (2913) to (3118) in 1437/1438 Hijri. This indicates that there is a demand for private schools in the continued increase each year, although we find that the secondary school for girls has been fluctuating in the increase and decrease began 1433/1434

(309) and in 1437/1438 decreased to (302) despite the increase in the year 1434/1435 to (310).

## **The second topic: Quadrant analysis and Linear Regression**

### **The first requirement: Quadrant analysis**

#### **1- Elements of quadruple analysis**

The quadruple analysis is used as a strategic analysis tool that helps institutions to identify the positive and negative factors which affect the institution whether from internal or external. This analysis is divided into four elements:

Strengths

Weaknesses

Opportunities: it's come from abroad such as increasing sales and profits

Threats: it's come from outside and can cause disturbances.

Quadruple analysis is an important tool in organizing information, provides solutions, identify challenges and capture opportunities.

The quadruple analysis is focus on the following elements: strength, weakness, opportunities and threats. These elements help to identify factors effect on strategic plans, work or initiative. To identify these elements which have negative and positive impacts helps institutions to communicate more effectively to identify elements in the plan to focus on. In the quadrant analysis we depending on Four digits and each element is listed side by side for comparison. In general, strengths and weakness not match the opportunities and threats listed, although there should be some correlation between these factors.

This technique / quadrant analysis consists of two aspects:

#### **Internal factors: -**

Internal factors refer to strengths and weaknesses, which include the resources and expertise available to the institution, that must be limited to what is really and truly strengths and weaknesses and that the analysis should move away from expectations and prospects, for example:

- Financial resources such as finance, sources of income and investment opportunities
- Physical resources such as sites, company facilities and equipment
- Human resources such as staff, volunteers and target audience
- Current processes such as employee programs, hierarchies and software systems

#### **External factors: -**

Each organization or individual is influenced by external factors, and it is important that these factors are documented and taken into account whether they are directly or indirectly related to opportunities or threats. External factors usually refer to things out of control of the institution, for example:

- Market changes, such as: products, new technology or changes in market needs.
- Economic changes, such as: financial, domestic or international changes.
- Funding, such as donations, legislative authorities and other institutions.
- Demographics, such as: age, race, gender and culture of the target audience.

#### **2- Quadrant Analysis Modal (SWOT)**

This model requires the compilation of internal and external evaluation results in two lists, one of list is the results of the internal assessment environment and the other external environment assessment results as shown in the following figure:



**Table No (3) Quadrant Analysis Modal**

	<b>Strengths</b>	<b>Weaknesses</b>
<b>Internal Factors</b>	Finical resources	High Prices
	Opportunities	Threats
<b>External Factors</b>	Opening up to Technology	Competition among Investors

The strengths, weaknesses, and threats of each element of learning achievement in within in highlights axis and evaluation were analyzed through institutional ability and educational Effectiveness.

**Table No (4) : Quadrant Analysis Modal of the private schools in the Kingdom designed by researcher**

	<b>Strengths</b>	<b>Weaknesses</b>
<b>Internal Factors</b>	<ol style="list-style-type: none"> <li>1. The existence of a vision, mission and strategic objectives approved, documented and declared and co-drafted by most of the concerned authorities involved in the educational process.</li> <li>2. The existence of an implementation plan approved by the Ministry of Education with application of the educational strategy.</li> <li>3- Comparing the private schools in the Kingdom with the foreign schools corresponding to the existence of specific specialties such as the subject of measurement and evaluation and methods of teaching English language.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inadequate space buildings in some schools with their needs.</li> <li>2. The lack of adequate and suitable places to conduct student activities (such studio, various sports and playgrounds).</li> <li>3. The lack of current plan to serve community and environmental development.</li> </ol>
	<b>Opportunities</b>	<b>Threats.</b>
<b>External Factors</b>	<ol style="list-style-type: none"> <li>1. A number of workshops and training courses were held by the Ministry of Education to ensure quality in the educational process.</li> <li>2. Participation of bodies and individuals from the community involved in the educational process in preparing message.</li> <li>3. Building a standard for the ethics of the teaching profession and adopted it as an indicator of good work for teaching staff members</li> </ol>	<ol style="list-style-type: none"> <li>1. Plans improvement is linked by financial resources in schools.</li> <li>2. Lack of adopting academic standards for programs in the most private schools.</li> <li>3. Different cultures of foreign schools that are guided by local cultures</li> </ol>

## The Second requirement: Linear Regression

the main objective of the regression model is to represent a complex system in a simple mathematical form so that we can provide a better understanding for characteristics of the relationship between the variables. This understanding is one of the interests of the manager or the decision maker in the institution or the state. Regression models are generally a very useful tool in the management of business processes. In general, regression models can be used in two main points:

First: Show the relationship between the variables

Second: Forecasting and Estimation

The regression analysis also aims at determining a regression equation that is relevant and matching the sample data so that the error variance is smaller. It is worth noting that reconciling a presumed model of data does not simply imply that these patterns are sufficient for this:

1. Test the appropriate model (draw the propagation form) and make sure the regression line is appropriate.
2. Evaluation of the regression model (using purely statistical methods).

### **The Estimate of Regression Equation:**

To estimate this relationship or function, it is necessary to estimate the Parameters values  $\alpha$  and  $\beta$ . As is known,  $\alpha$  is the fraction of the Y- axis and  $\beta$  is the slope of the straight line. For the of the Y- axis  $\alpha$ , it may take a positive value to be in the positive part of the y-coordinate or zero at its intersection with the point of origin or negative at its intersection with the y-coordinate in its negative part. The value of  $\beta$ , the slope of the regression line, may be positive or negative.

### **The Third topic: Models Analysis**

Through the data obtained from the Ministry of Education in the Kingdom of Saudi Arabia on the number of private schools from 1433h to 1438 we analyze this data using linear regression coefficient.

**Table (5): Variables Entered/Removed**

Model	Variables Entered	Variables Removed	Method
1	<sup>b</sup> Academic a year	.	Enter

a. Dependent Variable:

b. All requested variables entered.

**Table (6): Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.108 <sup>a</sup>	.012	-.024-	135.20740

a. Predictors: (Constant),

b. Dependent Variable:

**Table (7): ANOVA TABLE**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	6040.067	1	6040.067	.330	.570 <sup>b</sup>
1 Residual	511869.133	28	18281.040		
Total	517909.200	29			

a. Dependent Variable:

b. Predictors: (Constant),

**Table (8): Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	473.500	57.892		8.179	.000
Academic year	10.033	17.455	.108	.575	.570

a. Dependent Variable: number of Schools

**Table (9): Number of Schools**

Exact Number of Schools	PRE1	RES1
544.00	483.53333	60.46667
676.00	483.53333	192.46667
551.00	493.56667	57.43333
674.00	493.56667	180.43333
563.00	503.60000	59.40000
701.00	503.60000	197.40000
586.00	513.63333	72.36667
789.00	513.63333	275.36667
613.00	523.66667	89.33333
779.00	523.66667	255.33333
506.00	483.53333	22.46667
430.00	483.53333	-53.53333-
527.00	493.56667	33.43333
425.00	493.56667	-68.56667-
535.00	503.60000	31.40000
423.00	503.60000	-80.60000-
548.00	513.63333	34.36667
437.00	513.63333	-76.63333-
540.00	523.66667	16.33333
456.00	523.66667	-67.66667-
448.00	483.53333	-35.53333-
309.00	483.53333	-174.53333-
458.00	493.56667	-35.56667-
310.00	493.56667	-183.56667-
464.00	503.60000	-39.60000-
309.00	503.60000	-194.60000-
473.00	513.63333	-40.63333-
304.00	513.63333	-209.63333-
428.00	523.66667	-95.66667-
302.00	523.66667	-221.66667-

In the above table no (9) , we estimate that the actual number of schools in 1433 is 544, and 483 is the estimate and the error is 60, so we measure all the years.

## **Conclusion:**

In the conclusion of this research, we will discuss the summary of the research, which includes the most important results and recommendations of the study.

### **The most important search results**

Through the above the researcher has tackled the following:

1. The value of the regression coefficient is 0.108 and the mean value in the data is 0.33 which means that there is an increase in the number of schools each year.
2. The regression line segment is 473.5 and the slope is 10.0. This indicates that the average increase in each year equals 10 schools.
3. The value of the coefficient of measurement is 0.12 and the mean level is 0.57 and the correlation rate is -0.24. If the correlation is reversed, increase the number of schools by increasing the years.
4. The increase in the number of schools indicates the direction of investors to the field of education and this indicates that there are high profitability opportunities.
5. Through the State's policies in encouraging investment in educational fields, many investors have set up private schools.
- 6 – Parents turnout to private schools' evidence of the efficiency of these schools and their effectiveness in the stock in the educational process.

### **Recommendations:**

Through this study, we recommend the following educational process operators:

- 1- Opening the door for investors, encouraging them and supporting them with flexible investment policies in the field of private education.
- 2- Reviewing private schools to ensure the efficiency of education and its effectiveness in performing the educational role.

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