Using a Standard Model to Identify the Saving Determinants in the Kingdom of Saudi Arabia

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Authors' contributions

This work was carried out in collaboration between both authors. Author TAAA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors TAAA and MSEA managed the analyses of the study. Author TAAA managed the literature searches. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Low savings are an important factor in low economic growth rates. Saudi Arabia faces many future challenges, e.g., maintaining the gross domestic product, improving economic growth rates, providing job opportunities, as well as decreasing unemployment and nationalization rates. Therefore, the present research paper aims to identify the most important factors affecting domestic savings in Saudi Arabia by building a simultaneous equations model to measure interactions and interrelations between variables using 3SLS. The results showed a significant positive interaction between variables. Increasing domestic savings by 1% increased local investment by 0.957%, whereas increasing the investment coverage ratio by 1% increased local investment by 0.971%. Moreover, increasing local investment by 1% increased gross domestic product by 0.136%, while decreasing the rate by 1% increased gross domestic product by 0.334%. Increasing population by 1% increased gross domestic product by 1.520%. In short, these factors conveyed high rates of response.

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1. INTRODUCTION

The economy of the Kingdom of Saudi Arabia is one of the most powerful economies in the world as the Kingdom of Saudi Arabia is one of the top twenty economies in the world (G20). The Kingdom of Saudi Arabia has 18.1% of the proven oil reserves in the following year to come second in global ranking; in addition, the Kingdom has the fifth largest proved natural gas reserve, and it is an OPEC member; it is ranked third after Russia and USA in relation to the natural resources which are amounted to about 5 trillion US dollars; it is ranked the 7th among the top twenty economies in the world (G20) and 26th on the global level according to the Global Competitiveness Index and the Annual Written Update on Global Competitiveness of 2019 which is issued by the International Institute for Management Growth (IMD); this update measures the competitiveness of 140 countries all over the world, drawing on the capacity of the state to take more effective advantage of the available resources.

The Saudi economic growth constitutes an attractive investment environment in both non-oil sectors and stable economic factors as well as the increased public expenditure in the infrastructure and economic projects. In recent years, the average rate of annual growth increase was 4%; Gross Domestic Product (GDP) reached 792.97 billion US dollars in 2019; facilities for those who wish to invest increased, which made the Kingdom of Saudi Arabia the most developed Arab country in relation to the value of investment flows.

Thus, the issue of saving is one of the issues emphasized by the economic thought to constitute one of the foundations for economic growth. Also, many economists agree that saving is essential for to raising financial capital required for the implementation of any investment programme to boost the economic growth; the issue of savings decrease in States represents one of the most significant contributors to low rates of economic growth, thereby forcing these States to rely on external financing for investment; which is not desirable as it has adverse impacts on the economy of any State due to the burdens it brings about.

Therefore, the domestic savings constitute a major and vital contributor to the achievement of an appropriate and acceptable rate of economic growth as the average saving rate was about 198.11 billion dollars at current prices within the period (2000-2019). Many studies have discussed the importance of achieving an increased saving rate as an essential determinant of economic growth and highlighted the role and importance of the achievement of increased domestic saving rates for financing the capital formation required for the growth process. As we know from the economic thought, the balance between savings and investment (balance in goods and services market) is one of the major requirements for achieving macroeconomic balance and economic stability.

The Problem of this study is sustaining the gross domestic product (GDP), improving the performance of economic growth rates, creating job opportunities, and reducing the unemployment rates and resettlement are some of the main challenges facing the Kingdom of Saudi Arabia in the future; more emphasis should therefore be placed on enhancing the efficiency of the public and the role of the private sector, enhancing the competitive capacity, and further improving the investment and business climate to overcome these challenges and fulfill the objectives of the Kingdom's Vision 2030, working on diversity of income resources and attracting wide-scale investment for establishing many growth projects in various fields.

This study aims to determine the size of domestic savings and their effects on both the domestic investment and the gross domestic product (GDP); some statistical indicators were used to explain the behavior of the economic variables and their effects on the domestic savings and identify most important factors affecting the size of the domestic savings.

2. MATERIALS AND METHODS

The research counted on the simple descriptive statistical methods represented in the arithmetic average, the least square approach, the estimation of the general temporal trend of the variables under study, Durbin-Watson test for the identification of serial autocorrelation issue, quantitative analysis, standard analysis, and the establishment of simultaneous equations models [1] to measure the effects of interaction and correlation among the variables using 3SLS method after ensuring that the survey model satisfied all the economic, statistical and standard criteria.

2.1 Sources of Data

Data required for conducting this research were collected from some formal websites which is specialized in data collection as well as some references and studies related to the subject of this research.

3. RESULTS AND DISCUSSION

3.1 Growth of the Most Significant Economic Factors of the Kingdom of Saudi Arabia

3.1.1 Growth of GDP

The gross domestic product (GDP) is defined as the market value of all final goods and services which are locally adopted and produced in some country within a specific period. Table (1) shows that average GDP was about 505.69 billion US dollars during the period (2000-2019) at maximum rate of about 792.97 (billion US dollars) and minimum rate of 184.14 (billion US dollars) in 2001. According to the estimated equation of the general temporal trend, Table (2) has shown that GDP has shown a general upward and statistically significant trend by 35.87 (billion dollars), by about 7.09% of the average value of GDP during that period; as demonstrated by the value of the coefficient of determination, about 90.2% of the annual change in the value of GDP is mainly attributable to the temporal factor.

3.2 Growth of Domestic Investment

At the level of the national economy, investment is defined as the capital spending on new projects in the new projects in sectors of public facilities and infrastructure, such as the projects of the construction of main or secondary roads, water supply, drainage, urban planning, construction and housing, electrification, power generate, and social growth of the fields of education, health and communication; as well as the projects which are get benefits from the economic activity to produce goods and services in the production and service sectors, such as industry, agriculture, housing, health, education and tourism. Investment is also defined as adding new production capacities to the production assets in society through establishing new projects or expanding the current projects. Thus, the domestic investment constitutes the total business expenditure divided on increase in fixed assets of the economy and then added to

the net changes in level of inventories. The fixed assets include land improvements (building walls and ditches, and drainage canals and so on), purchases of instruments, machinery and equipment, road projects, railway projects, and relative fields including schools, offices, hospital, private houses, commercial and industrial premises, and inventories which include stock of goods held by the companies to cope with the temporary or unexpected volatility of production or sales and the work being carried out.

Table (1) shows that the domestic investment was about 136.79 billion dollars during the study period (2000-2019), up to the maximum of about 228.18 billion US dollars in 2019 and down to the minimum of about 36.13 billion dollars in 2001. According to the estimation of the general temporal trend, table (2) shows that the domestic investment showed an upward and statistically significant trend by 11.53 billion US dollars, by 8.43% of the average value of domestic investment during that period; the value of the coefficient of determination shows that about 90.6% of the annual change in the domestic investment is mainly attributable to the temporal trend.

3.3 Rate of Investment to Gross Domestic Product

As shown in Table (1), the average rate of investment to the gross domestic product was about 25.26% of the gross domestic product during the period of study as the rates fluctuated between the upward trend and the downward one; the minimum rate was about 19.32% in 2000, and the maximum rate was about 34.17% in 2015.

3.4 Growth of Domestic Saving

The total investment is calculated as the total national income minus total consumption, in addition to the net transfer. All data are expressed in current United States dollars.

As shown in Table (1), the average rate of the domestic savings was about 198.11 (billion US dollars) during the period of study (2000-2019), up to the maximum of about 360.10 (billion US dollars) in 2012 and down to the minimum of about 51.61 (billion US dollars) in 2001. According to the estimated equation of the temporal trend and as shown in Table (2), the domestic savings showed a general upward and statistically significant trend by 11.35 (billion US

dollars), by 5.73% of the average value of the domestic savings during that period. As demonstrated by the value of coefficient of determination, about 47.9% of the annual change in the domestic savings are mainly attributable to the temporal factor.

3.4.1 Rate of domestic savings to the total domestic product

As shown in Table (1), the average rate of domestic savings to the gross domestic product was about 38.82% of the gross domestic product during the period of study (2000-2019) while the rates fluctuated between the upward trend and downward one as the minimum rate was about 25.50% in 2010, and the maximum rate was about 52.75% in 2008.

3.4.2 Final consumption expenditure (billion dollars)

As shown in Table (1), the average value of the final consumption expenditure was about 288.28 (billion US dollars) during the study period (2000-2019), up to the maximum of about 497.86 (billion US dollars) in 2019 and down to the minimum of 117.57 (billion US dollars) in 2000. According to the estimated equation of the general temporal trend and as shown in Table (2), final consumption expenditure showed a general upward and statistically significant trend by 23.50 (billion US dollars), by 8.15% of the average value of the final consumption expenditure during that period. As demonstrated by the coefficient of determination, about 96.6% of the annual change in the final consumption expenditure is mainly attributable to the temporal factor.

3.4.3 GDP per capita in US dollars

As shown in Table (1), the average value of GDP per capita was about 17729 (dollars) during the period of study (2000-2019), up to the maximum of about 25243 (dollars) in 2012 and down to the minimum of about 8685 (dollars) in 2001. According to the estimated equation of the general temporal trend and as shown in Table (2), GDP per capita showed a general upward and statistically significant trend by 867.35 (billion US dollars), by 8.15% of the average value of GDP per capita during that period. As demonstrated by the coefficient of determination, about 76.9% of the annual change in GDP per capita is mainly attributable to the temporal factor.

3.4.4 Population (million inhabitants)

As shown in Table (1), the average value of population of the Kingdom of Saudi Arabia was about 27.32 (million inhabitants) during the period of study (2000-2019), up to the maximum of about 34.27 (million inhabitants) in 2019, and down to about 20.66 (million inhabitants) in 2000. According to the estimated equation of population growth and as shown in Table (2), the population of the Kingdom of Saudi Arabia showed a general upward and statistically significant trend by 0.75 (million inhabitants), by 2.75% of the average value of population of the Kingdom during that period. As demonstrated by the coefficient of determination, about 99.7% of the annual change in population is mainly attributable to the temporal factor.

3.4.5 Investment coverage rate

Investment coverage Rate is the percentage of the domestic savings to the domestic investment, it shows the rate of the contribution of the domestic savings to the domestic investment. As shown in Table (1), the average investment coverage rate was about 156.55% during the period of study (2000-2019), up to the maximum of about 241.16% in 2005 and down to the minimum of about 74.63% in 2015. According to the estimated equation of the general temporal trend and as shown in Table (2), the investment coverage rate showed a general downward and statistically significant trend by -4.12, by -2.63% of the average value of investment coverage rate during that period. As demonstrated by the coefficient of determination, about 30.4% of the annual change in the investment coverage rate is mainly attributable to the temporal factor.

3.4.6 Age dependency rate (% of population within the working age)

Age dependency rate is represented by the percentage of the number of people unable to work (less than the age of 15 + more than the age of 64) to the number of people within the working age (15-64). As shown in Table (1), the average value of the age dependency rate was about 50.97% during the period of study (2000-2019), up to the maximum of about 70.28% in 2000 and down to about 39.43% in 2019. According to the estimated equation of the general temporal trend and as shown in Table (2), the age dependency rate showed a general downward and statistically significant trend by -1.69, by -3.32% of the average value of the age

dependency rate during that period. As demonstrated by the coefficient of determination, about 96.1% of the annual change in the age dependency rate is mainly attributable to the temporal factor.

3.4.7 Inflation rate %

As shown in Table (1), the average inflation rate was about 2.18% during the period of study (2000-2019), up to the maximum of about 9.87% in 2008 and down to the minimum of about -2.09% in 2019.

3.4.8 Unemployment rate %

As shown in Table (1), the average unemployment rate was about 5.58% during the period of study (2000-2019), up to the maximum of about 6.25% in 2006 and down to the minimum of about 4.57% in 2000.

3.4.9 The standard model used for the identification of the most significant economic factors impacting the domestic savings in the Kingdom of Saudi Arabia

The use of the ordinary least squares (OLS) method results in partial and imbalanced findings obtained through using the simultaneous models as such models include reciprocal interference and impacts among the internal variables on one hand and external variables on the other hand; thus, there is an essential requirement for using an appropriate standard method for estimating these simultaneous relations.

The simultaneous equation model can be defied as the model of which the equilibrium value of at least one of its internal variables cannot be determined without using all the equations contained in the model simultaneously so that the internal variables in the model equations are interlinked with each other as the dependent variable in the first equation may be included within a set of independent variables in the second equation [2].

Such equations are called the structural equations as these equations provide a main structure for the subject of study; also, the model consists of two main types of variables; the first type of variables is represented by the internal variables which are determined in the model itself as these variables essentially count on the model while the second type is represented by the external variables as the value of these variables does not essentially count on the model [3].

To get the model well-built, there is a requirement for the identification of the problem and diagnosis as the problem of diagnosis indicates the potentiality to calculate the structural coefficients of the set of simultaneous equations through the coefficients of the reduced model or the impossibility of calculating these structural coefficients. The issue of identifying the problem and diagnosis is one of the essential issues which challenge the capacity of building the standard model as it is concerned with how to measure each structural equation for the model, which facilitates the identification of whether model is built in a way which allows for getting single and unique ratings for coefficients from data or not [4].

The equation is totally diagnosed in the model when the total number of variables in the model as a whole minus the total number of variables in the equation which is purposed to be diagnosed equals the number of internal variables in the equation minus 1 while if it is more than that, the equation is above the diagnosis; however if it is less than that, the equation is under diagnosis and cannot be measured.

According to the model, the ordinary least squares (OLS) method is not applicable as the OLS method can be conducted within two stages (Two-Stage least Squares "2SLS") or within three stages (Three-Stage least Squares "3SLS") which is considered the most appropriate method for estimating the parameters of this model as an application of the model, not just of one equation.

Testing the ideal model depends on the level of the identification of the simultaneous model (E). by testing the level of identification for this the model, which was built for the three internal variables, the first, second and third equations are exactly identifiable; thus, the ideal statistical method was used for estimating the model relations, which is the (Three-Stage least Squares "3SLS") in the logarithmic form. Also, Cochran-Orault method was used for handling the problem of autocorrelation among the rest, especially that the model depended on data of time series during the period of study (2000-2019) [5].

This section includes [6] the presentation and discussion of the results of the estimates of the structural relations of the suggested model with coefficient of elasticity [7] to reflect the relative degrees of the response to the internal variables accompanying [8] the potential changes in the external factors.[9]

3.5 Description of the Model

$$L.SA_t = C(1) + C(2) * L.IN_t + C(3)* GDP_t - C(4)* F.CO_t - C(5)* AGE.D_t$$
$$L.IN_t = C(6) + C(7) * L.SA_t + C(8)* GDP_t + C(9)* F.CO_t + C(10)* I.C.R_t$$
$$GDP_t = C(11) + C(12) * L.SA_t + C(13)* L.IN_t - C(14)* UN.R_t + C(15)* POP_t$$

Where,

$L.SA_t$ = *domestic Savings (billion dollars), $L.IN_t$ = domestic Investment (billion dollars), GDP_t = total domestic Investment (billion dollars), $F.CO_t$ = final consumption expenditure (billion dollars), $I.C.R_t$ = investment coverage rate (billion dollars), $UN.R_t$ = unemployment rate (billion dollars), POP_t = population in the Kingdom of Saudi Arabia (million inhabitants), $AGE.D_t$ = age dependency rate.*

The model consists of three internal variables, which are (GDP_t ، $L.IN_t$ ، $L.SA_t$) and five external variables, which are ($F.CO_t$, $I.C.R_t$, $UN.R_t$ POP_t , , $AGE.D_t$). Thus, the model was estimated using the ordinary least squares method and the three-stage least squares "3SLS" method in the dual logarithmic form as this form proved to be the most appropriate form according to the statistical logic; the obtained findings are as the following:

Table (3) shows the results and findings of the estimates and quality standards for the model equations, which constitute the amended coefficient of determination (R^{-2}) which clarifies the impact of the independent variables on the identification of changes in the dependent variable. The table further shows the value of (F) for each equation, which statistically clarifies the significance of each equation for the model at the statistically significant level of 1%. The results and findings of each equation for the model are as the following:

3.6 Total Domestic Savings

Equation (1) as shown in Table (3) shows the factors affecting the domestic savings in the Kingdom of Saudi Arabia during the period of study (2000-2019) where it appeared that the total value of the domestic investment, total value of the gross domestic product, total value of final consumption expenditure, age dependency rate represent about 99.3% of the changes in the formation of the total value of domestic savings according to the amended coefficient of

determination while the other variables are mainly attributable to other unmeasured factors. The findings show the stability of the statistical significance of both the total value of the gross domestic product and value of the final consumption expenditure as the increase in the total value of domestic savings by 1% results in the increase of the total value of the domestic savings by 2.71% while the decrease in the total value of the final consumption expenditure by 1% resulted in the increase in the total value of the domestic savings by 1.67%. However, both the total value of domestic investment and age dependency rate failed to show statistical significance.

3.7 Total Domestic Investment

Equation (2) in Table (3) shows the factors affecting the domestic savings in the Kingdom of Saudi Arabia during the period of study (2000-2019) where it appeared that the total value of the domestic savings, value of gross domestic product, value of final consumption expenditure and investment coverage rate represent 99.9% the changes in the formation of the total value of the domestic savings according to the amended coefficient of determination while the other variables are mainly attributable to other unmeasured factors. The results showed that both the total value of the domestic investment and the investment coverage rate showed statistical significance as the increase in the total value of the domestic savings by 1% results in the increase in the total value of the domestic investment by 0.957% while the increase in the investment coverage rate by 1% results in the increase in the total value of the domestic investment by 0.971. Also, both the value of the gross domestic product and the value of the final consumption expenditure failed to show statistical significance.

3.8 Value of Gross Domestic Product

Equation (3) as shown in Table (3) shows the factors affecting the domestic savings in the Kingdom of Saudi Arabia during the period of study (2000-2019) as it appeared that the total value of the domestic savings, total value of the domestic savings, unemployment rate and population represent about 995% of the changes in the formation of the total value of the gross domestic product according to the amended coefficient of determination while the other variables are mainly attributable to other unmeasured factors.

Table 1. Growth of the most significant economic indicators in the kingdom of Saudi Arabia during the period (2000-2019)

Years	Gross Domestic Product (billion dollars)	Domestic Investment (billion dollars)	%Rate of Domestic Investment from Gross Domestic Product	Domestic Savings (billion dollars)	%Rate of Domestic Savings from Gross Domestic Product	final consumption expenditure (billion dollars)	GDP per capita (dollars)	Population (Million Inhabitants)	Investment Coverage Rate	Age Dependency Rate (% of population within the working age)	Inflation Rate %	Unemployment Rate %
2000	189.51	36.61	19.32	57.34	30.26	117.57	9171.33	20.66	156.64	70.28	-1.12	4.57
2001	184.14	36.13	19.62	51.61	28.03	119.08	8684.65	21.20	142.83	67.50	-1.12	4.62
2002	189.61	37.34	19.69	55.50	29.27	119.46	8695.40	21.81	148.63	64.97	0.25	5.27
2003	215.81	42.07	19.49	75.14	34.82	126.53	9609.97	22.46	178.61	62.63	0.61	5.56
2004	258.74	51.40	19.86	109.03	42.14	137.77	11185.14	23.13	212.13	60.42	0.52	5.82
2005	328.46	66.27	20.17	159.81	48.65	156.60	13791.45	23.82	241.16	58.32	0.48	6.05
2006	376.90	83.73	22.22	182.82	48.51	181.16	15384.74	24.50	218.34	56.12	2.21	6.25
2007	415.96	110.12	26.47	203.52	48.93	201.81	16516.63	25.18	184.82	53.95	4.17	5.73
2008	519.80	141.88	27.30	274.20	52.75	231.75	20078.26	25.89	193.26	51.91	9.87	5.08
2009	429.10	136.09	31.72	157.04	36.60	253.02	16113.14	26.63	115.40	50.10	5.06	5.38
2010	528.21	163.36	30.93	230.11	43.56	277.22	19262.55	27.42	140.86	48.53	5.34	5.55
2011	671.24	181.04	26.97	339.58	50.59	311.95	23745.80	28.27	187.58	46.34	5.83	5.77
2012	735.97	195.34	26.54	360.10	48.93	356.42	25243.36	29.16	184.35	44.47	2.87	5.52
2013	746.65	197.64	26.47	333.07	44.61	391.27	24844.74	30.05	168.53	42.89	3.53	5.57
2014	756.35	217.46	28.75	294.41	38.92	439.74	24463.90	30.92	135.39	41.59	2.24	5.72
2015	654.27	223.58	34.17	166.86	25.50	459.99	20627.93	31.72	74.63	40.54	1.21	5.59
2016	644.94	199.50	30.93	175.65	27.24	442.69	19879.30	32.44	88.05	40.12	2.07	5.65
2017	688.59	198.67	28.85	209.13	30.37	451.90	20803.75	33.10	105.27	39.79	-0.84	5.89
2018	786.52	189.37	24.08	260.74	33.15	491.82	23338.96	33.70	137.69	39.58	2.46	6.04
2019	792.97	228.18	28.78	266.48	33.61	497.86	23139.80	34.27	116.79	39.43	-2.09	5.93
Mean	**505.69**	**136.79**	**25.62**	**198.11**	**38.82**	**288.28**	**17729.04**	**27.32**	**156.55**	**50.97**	**2.18**	**5.58**

Source: https://data.albankaldawli.org

Table 2. Temporal trend models for the growth of some economic indicators in the Kingdom of Saudi Arabia during the period (2000-2019)

Models	Variable	Minimum	Maximum	Mean	Std. Deviation	Amount of change	T-Test	Rate of change %	R^2	F	Durbin-Watson stat
Linear	Gross Domestic Product (billion dollars)	184.14	792.97	505.69	223.44	35.87	12.89**	7.09	0.902	166.16**	1.59
Linear	Domestic Investment (billion dollars)	36.13	228.18	136.79	71.66	11.53	13.18**	8.43	0.906	173.67**	1.54
Linear	Domestic Savings (billion dollars)	51.61	360.10	198.11	97.02	11.35	4.07**	5.73	0.479	16.53**	1.67
Linear	final consumption expenditure (billion dollars)	117.57	497.86	288.28	141.45	23.50	22.75**	8.15	0.966	517.63**	1.89
Linear	GDP per capita (dollars)	8684.65	25243.36	17729.04	5849.98	867.35	7.75**	4.89	0.769	60.06**	1.68
Growth	Population (Million Inhabitants)	20.66	34.27	27.32	4.43	0.75	82.89**	2.75	0.997	6871**	1.96
Linear	Investment Coverage Rate	74.63	241.16	156.55	44.24	-4.12	-2.80*	-2.63	0.304	7.85*	2.15
Linear	Age Dependency Rate (% of population within the working age)	39.43	70.28	50.97	10.25	-1.69	-21.1**	-3.32	0.961	443**	1.23

Source: Calculated from Table [1].

Table 3. the results of the estimates of the reduced form of the standard economic model used for the identification of the most significant economic variables affecting the domestic savings in the Kingdom of Saudi Arabia during the period of study (2000-2019)

Eq. No.	Dependent Variable	Model Equations	R^{-2}	F	Durbin-Watson stat
1	Domestic Savings (billion dollars)	$Log\ L.SA_t = -0.175 - 0.082\ Log\ L.IN_t + 2.71\ Log\ GDP_t - 1.67\ Log\ F.CO_t + 0.349\ Log\ AGE.D_t$ (-0.179) (-0.905) (22.95)** (11.32)** (0.922)	0.993	557**	2.003
2	Domestic Investment (billion dollars	$Log\ L.IN_t = 1.86 + 0.957\ Log\ L.SA_t + 0.087\ Log\ GDP_t + 0.026\ Log\ F.CO_t + 0.971\ Log\ I.C.R_t$ (28.10)** (23.09)** (0.842) (0.42) (57.94)**	0.999	279**	2.565
3	Gross Domestic Product (billion dollars)	$Log\ GDP_t = -0.397 + 0.379\ Log\ L.SA_t + 0.136\ Log\ L.IN_t - 0.334\ Log\ UN.R_t + 1.520\ Log\ POP_t$ (-2.26)* (11.19)** (2.48)* (3.15)** (9.32)**	0.995	697**	1.412

*where: values between brackets below the coefficients of regression indicate the calculated values (t). * Statistically significant at the statistical significance of 0.05. statistically significant at the statistical significance of 0.01 Source: Data are collected and estimated from Table (1)*

The statistical results and findings showed that the total value of the domestic savings, total value of the domestic investment, unemployment rate and population showed statistical significance as the increase in the total value of the domestic savings by 1% results in the increase in the total value of the gross domestic product by 0.379% while the increase in the total value of the domestic investment by 1% results in the increase in the total value of the gross domestic product by 0.136%; also, the decrease in the unemployment rate by 1% results in the increase in the total value of the gross domestic product by 0.334% while the increase in population by 1% results in the increase in the total value of the gross domestic product by 1.520%.

4. CONCLUSION AND RECOMMENDA-TIONS

Saving is regarded as one of the most important issues emphasized by economic thought as one of the pillars of economic development. Many economists agree that saving is necessary for providing the capital necessary for implementing any investment program to create a strong boost in economic growth. The problem of low savings in countries is the most important factor behind the decline in economic growth rates. Therefore, preserving total local income, improving the performance of economic growth rates, providing job opportunities, and reducing unemployment rates are among the most important future challenges facing the Kingdom of Saudi Arabia. Therefore, work must be done to enhance the efficiency of public finance performance, role of private sector, and competitiveness and to continue improving the climate of investment and business for overcoming these challenges and achieving the goals of Vision 2030. Therefore, the research attempts to identify the most important factors affecting local saving in the Kingdom of Saudi Arabia through constructing Simultaneous Equations Models to measure interwoven interactions between variables using the 3SLS method. The results showed the noticeable positive and significant reciprocal effect between the variables: increasing the value of total local savings with 1% leads to an increase in the value of total local investment with 0.957% while increasing investment coverage rate with 1% leads to an increase in the value of total local investment with 0.971%. The results also showed that increasing the value of total local income with 1% leads to an increase in the value of total local income with 0.379%, while

increasing the value of total local investment with 1% leads to an increase in the value of total local income by 0.136%. Decrease of Unemployment rate by 1% leads to an increase in the value of the total local income by 0.334%, while an increase in population with 1% leads to an increase in the value of total local income with 1.520%, as high degrees of response appeared in these factors.

4.1 Based on the Study Results, We Recommend the Following

- Promote a culture of savings among individuals.
- Working on spreading the culture of saving among individuals.
- Motivating government agencies and shareholding companies of all kinds to establish saving funds or portfolios since they are considered among the factors supporting the safety element that the investor needs.
- Developing fiscal and monetary policies, to ensure balance in the macro economy (aggregate supply, aggregate demand) to bridge the gap that might appear between saving rate and investment rate.
- Increasing investment incentives is necessary for attracting domestic and foreign investments to accelerate development and economic growth.
- Work to reduce unemployment through rehabilitation and investment training programs for young people.
- Mobilize the State authorities and different kinds of joint-stock companies to establish funds or savings as this constitutes one of the factors supporting the or safety investors need.
- Develop both financial and fiscal approaches in a way that ensures the achievement of macroeconomic balance (aggregate supply and aggregate demand) to bridge the gap which may appear between the saving rate and investment rate.
- There is an essential requirement for promoting the investment incentives for enhancing development and economic growth.
- Work to reduce unemployment through developing rehabilitation programmers and training courses for young people for investment.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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