The Effect of Fiscal and Monetary Policy on Private Investment in Jordan by Using Time Series Analyses

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Abstract:

the aim of this research to a statement of the impact of each financial and monetary policy on private investment in Jordan during the period (1980 - 2014), aims to assess the relationship between private investment and a group of influential factors such as (gross domestic product (GDP), money supply , direct taxation, government spending, and the interest rate) .To achieve this objective was the use of model VAR (Vector Auto Regression) on variables study, has also been applied Unit Root Test to see whether the study variables stable, with the passage of time, showing that the gross domestic product (GDP), and government spending and money supply is stable at the second difference I(2), either private investment and the interest rate and direct taxation is stable at the difference I(1).And the application of the test of the choice of the number of periods of Lags during the testing of less than the value of the viable (Akaike and Schwartz) where he found that the best number of years the slowdown is three years.The Granger test of causality with that there is a bidirectional relationship between private investment and government spending as well as between private investment and direct taxation any that each causing the other. And that there is a single trend between private investment and gross domestic product (GDP) and any that the gross domestic product (GDP) cause private investment. And that there is a single trend between private investment and any criticism that the presentation of the money supply cause private investment. There is a causal relationship in any direction between the interest rate and private investment.It was also the use of the two main instruments for analysis: analysis of the components of the variance a respond to the backlash of the Act. It was found that all of the gross domestic product (GDP) and IMF and government spending and direct taxation positively affects primarily. Either the interest rate affect negatively on private investment in Jordan, this is consistent with the Economic Theories previous studies and discussed in the relevant subject. The study recommends that the need for the use of monetary policies and finance including offers an investment climate to encourage investment.

Introduction:

investment enjoys a privileged place it topics popular clear before the government economists in the light of world economic trends and has an influential role and positive role in the process of economic growth and development, and counts by many States in solving its economic problems of poverty, unemployment and low levels of production, and the low level of per capita income, high rates of inflation. As a result, signs of competition between the various States to attract international investments, thereby harmonizing these States to improve their investment environments through incentives encouraging laws and attracting investment.

The impact of economic policies in the economic activity of the important topics in macroeconomic analysis, controversy continues around them; the actions taken by the state to influence the gross domestic product (GDP) and a number of economic objectives, the most important of which is raising the rates of growth and full employment and price stability, known as the economic policies which is divided into two parts are important: fiscal policy, monetary policy; financial policy meant the use of taxes and government spending any set of actions taken by the State including related income and expenditures, while using the monetary policy of the legal reserve discount price open-market operations as tools to achieve the economic goals and commensurate with the investment environment.

Jordan, like other countries of the world and heading for economic and social growth an integrated, and through seeking to raise the standard of living of its members focused on the investment process as one of the most important components of the gross domestic product (GDP), through the adoption of a series of corrective actions fiscal and monetary policies aimed at restoring confidence in the investment environment in Jordan through action to achieve monetary stability, in addition to the modernization and development of the laws and legislation in support of investment and the establishment of the institution of encouraging investment.

The volume of total investment in 1980 toward (463.9 million dinars, rising in 1990 to about 694.1 million dinars and about (1266.7 million dinars in 2000 finally rose to (23,063.9 million dinars in 2014.(the Jordanian Central Bank, Annual reports).

With regard to private investment, the volume of private investment in 1980 (294.15 million dinars, it rose in 2009 to about (1945.1 million dinars, the rate (12%) of GDP and (74%) of total investment. Demonstrating the importance of private investment in Jordan for the total investment amounted to GDP.(the Jordanian Central Bank, Annual reports).

The objective of the study is to a statement of the impact of each financial and monetary policy on private

investment in Jordan during the period (1980_2014) with a focus on private investment in terms of its forms, sectoral nationwide, the problems faced by the. It also aims to search for the determinants of investment, etc.

The importance of the study:
comes the importance of the study of the few studies of its kind in Jordan and the study on the impact of the financial and monetary policy on private investment in Jordan using the time series. This covers the longer period of time than most other, it is also consistent with the economic reality in Jordan, and in line with the government interest in the individual and the subject where private investment is considered one of the economic solutions effective in achieving economic growth and economic and social development.

The study methodology:
Use the two researchers in this search descriptive approach analytical work, which is based on an estimate of the relationship between the private investment in Jordan and fiscal and monetary policies during the period (1980_2014) using the regression model of autonomy (VAR).
    They will also benefit from the following tests:
1. The root test unity to know whether the economic variables used in the study stable, with the passage of time.
2. A test to determine the (Lags) number of periods of idling timetable during the testing of less value to the criterion of (Akaike and Schwartz) .
3. Granger Causality Test with to determine the direction of a causal link between the variables.
    Use will be key instruments for analysis:
1. Variance Decompostion .
2. Impulse Response Function to the backlash of the act to trace the route timetable to sudden changes which could be exposed to different variables model.

Previous studies:
Was the subject of investment, the focus of attention of a large number of economists to the topic of great importance in the economies of the countries, however, the studies on the subject of the study are rare because most of the studies focused on direct foreign investment, the most important of those studies:
    Study **(government spending and its impact on private investment in Jordan)** (Zyadat, 2000) analysis of the structure of government spending on both sides of the capitalist in Jordan during the period (1996-1970) as well as the analysis of the structure and development of private investment in Jordan, and analysis of the relative importance to the total investment, in addition to distributed to various economic sectors. Also aimed at identifying the most important factors affecting in government expenditure in Jordan, and analyze the impact on private investment.
    The study standard model, making government spending a function in each of: (gross domestic product (GDP), public revenues, private investment, government expenditure in the previous year and the number of the population), the results of the study showed a positive relationship between the government spending on the one hand and economic variables: GDP public revenues and the number of the population. On the relationship between government spending and private investment, the study showed that there is a positive impact for capital expenditure on private investment, and the impact of the negative impact the current expenditure on private investment.
    The study **(the role of macroeconomic policies in the private sector investments in Sudan, 1990_2007)** (Sudan University, Ahmad Badawi, 2008) aimed at verifying the impact of macroeconomic policies on the private sector investments by focusing on some of the settings: (public investment, banking credit to the private sector, the rate of exchange, national income), using the model of the gradient self-common integration model and error correction.
    This study to the gross domestic product (GDP) was a positive impact directly on private investment in the long term during the study period this is confirmed in a study (government spending and its impact on private investment in Jordan) (Zyadat, 2000) which was mentioned earlier, and that the expansion of government investment had a negative impact on the private sector investments while the curtailment in later periods has had a positive impact in spite of the fluctuation of the author in the long term, credit and real banking system has had a positive impact in the short term while negative impact on long-term.
    The aim of the study Haiyan County Song and Zinan Liu (Haiyan Song and Liu Zinan,2001) entitled " **investment decisions in China during the period of reform)** to analyze investment decisions in the long term the influential factors during the period of economic reform in China (1983_1953). The study standard model, making investment a function in each of: (gross domestic product, government expenditures, wages, taxes and interest rates).
    Results of appreciation to the existence of a negative relationship between wages and the interest rate and taxes on the one hand and investment on the other hand, in the long term, as well as a positive relationship and

strong between expenditures and ongoing governmental and gross national product on the one hand and investment on the other hand.

It adopted a study **(private investment policies and financial sector in Malaysia and India)** (James 2009(method of time-series analysis (VAR) made special investment a function in each of the interest rate and criticism.

The results of this study that the presentation of the money supply would positively affect the private investment in the two countries, and the interest rate has a negative impact on investment in each of India and Malaysia, and this is what has been reiterated in most of the studies which have been addressed in this search.

As well as the study of the **(Gaobo pang, Ahmet Aysan; Middle East and North Africa (MENA),1970_1999)** : (analysis of the factors that lead to the growth of private sector investment in the countries of Eastern and North Africa) Using data of 40 developing countries and the countries of eastern and central and north Africa using data (private investment as a proportion of gross domestic product (GDP), an accelerated investment, interest rates and the stability of the macroeconomic policies and structural reforms, external stability, economic fluctuations, infrastructure) study concluded that the instability and the burden of indebtedness, contributed largely to the volatility of private investment in the countries of the region in addition to the contributions of less than in the composition of the private capital and contributed to the private sector in the countries of the region about more than 20% of the GDP.

It is thus clear to us that the most studies models of Arab and foreign countries which dealt with the subject of private investment followed the descriptive approach and methodology of the analytical work of the standard research in building the model used most of the main determinants of private investment in developing countries. Models of local studies have all studying some aspects of private investment and some other studies dealt with the most important obstacles facing the private investment as a Study Center for Strategic Studies at the Jordanian University.

This will study on the development of a model for private investment, particularly in the light of the followers of financial and monetary policy, which makes the issue of private investment in extremely important. Will Be the use of time-series analysis VAR aim to clarify the impact of each of the financial and monetary policy on private investment.

The conceptual framework of the study

The process of economic development need for intensified efforts to move the economy to an advanced stage of development. These efforts are summarized in the high investment rates sufficiently to achieve the growth rate in income, more than Population growth rate rate at the very least, hence the importance of investment as the engine of the process economic and social development, and a prerequisite for the exploitation of resources, the formation of productive capacities in order to move the economic growth which is associated with the size capital formation. Investing plays a key role in the economic life as a determinant of the rate of economic growth and development of productive and component effective dynamically in the national income, increase production volume and improve the living conditions of the members of the community and increase the operation of labor, thereby achieving high growth rates. But achieving development and raise the economic growth rate, does not depend on the extent to which your rate of investment only, but are closely linked to the quality of investment, and its distribution on the economic sectors, and how it is used by this volume of investment, it comes to structural investment.

The high investment rate and thus capital accumulation rate, is a necessary condition to accelerate process development, and this is a clear matter of indisputable, but to do so it is not without the availability of the basic elements of the development process, which provides the conditions and requirements necessary for the success of the investment project development. Which affect it several variables are:

Economic and political variables, variables legal, administrative, and social and cultural variables.

The investment process as development projects require a favorable climate does not depend on a particular specific law, but mainly based on a number of conditions and macro-economic fundamentals that create ground can grow where development projects.

And can be summarized the importance of investment in the following points:
1. Increasing the national income.
2. The creation of jobs.
3. Support to the process of economic and social development.
4. The increase in production and trade balance and balance of payments.
   Investment consists of several types:
1. **The real investment and financial investment** : the real investment in real assets (Economic concept), either financial investment regarding investment in securities debentures, bonds, certificates of deposit and other.
2. **Long-term investment, investment and short-term** : long-term investment is the one who takes the form of stocks and bonds, which is called the capital investment. The short-term investment is investment in securities

in the form of treasury bills, acceptances and bank accounts or certificates of deposit called cash investment.
3. **The independent investment and investment catalyst** : The Independent Investment basis in the increased income and gross national product by the business sector or the government or of foreign investment. The catalytic investment comes as a result of the increased income (the relationship between the Positive).
4. **The financial investment human investment** : the financial investment what is the traditional form of investment any real investment, either human investment is the interest of the human element through education and training.
5. **Investment in the areas of research and development** : this type of investment of particular importance in the developed countries, where the allocated to these states sums; because it helps to increase the competitiveness of their products in the world market, as well as finding new ways of production.

   Investment is determined by the number of determinants of the :
1. Rate of interest (inverse relationship in accordance with Economic concept for investment).
2. The marginal efficiency of capital (marginal productivity of capital invested or return on invested capital).
3. Scientific and technological progress.
4. Competitiveness and export capacities.
5. The degree of risk.
6. The availability of economic and political stability and investment environment.
7. Other factors such as the availability of awareness of savings and investment, as well as the availability of the financial market.

The reality of investment in Jordan
Marked investment spending in Jordan during the period (1980 _2014) situation of instability in terms of both its rates or development or in terms of the levels of its contribution to the gross domestic product (GDP).

The evolution of the volume of expenditure total investment and private sectors:
Will we are talking here about the evolution of the volume of private investment as a proportion of gross domestic product (GDP) during the study period that extended from (1980 _2014).

With the mid 1970s and early 1980s witnessed the most Arab states high growth rates as a result of the rise in oil prices and oil wealth at that time, this was reflected the growth rates in Jordan, the fact that Jordan in that period was the most important exporters of the workforce. And affected workers' remittances on the movement of investment in Jordan, with increasing rates of assistance and loans granted by the Arab States and the Gulf countries, especially Jordan, thanks to the constant flow of large financial resources Jordan managed to achieve investment rates high in this stage, as the volume of total investment in 1980 toward (463.9 million dinars and private investment (294.15 million dinars, the rate (10.5%) of GDP, as shown in table No. (1). But in the late 1980s after Jordan to the debt crisis and the sharp economic 1989 which had resulted in the decrease of the exchange rate of the Jordanian dinar, investment had declined in Jordan, bringing the total investment to about (554.5) million dinars, and private investment to about (307.2), a rate of 9 percent of GDP. (table 1).

In order to emerge from this crisis, the Government has taken the policies and in cooperation with the International Monetary Fund and the World Bank was the most prominent of the programs of economic adjustment, where the total investment and private sectors significantly as the total investment 1996 toward (1444.9 million dinars, and private investment toward (901.6) million dinars, or (19.1%) of GDP, in 2014, the volume of total investment (6303.3) million dinars, and private investment toward (4573.6), or (17.98%) of the GDP. Table No. (1)

Table No. (1)

The evolution of the volume of investment spending in Jordan (Macroeconomic year, and private sectors (million dinars)

The Year	Private investment	Government investment	total investment	The gross domestic product (GDP)
1980	294.15	169.84	463.9	1164.8
1981	580.25	120.67	701	1448.7
1982	485.05	165.75	650.7	1649.9
1983	433.76	156.64	589.8	1786.6
1984	465.16	106.04	571.2	1909.7
1985	184.4	200.3	1,384.4	1970.5
1986	186.9	222.5	409.4	2240.5
1987	175.8	272.7	448.5	2286.7
1988	339.5	173.8	513.3	2349.5
1989	307.2	247.3	554.5	2425.4
1990	422.5	271.6	694.1	2760.9
1991	447.8	230.2	678	2,958
1992	804.2	245	1049.2	3611.6
1993	1046.5	257.1	1303.6	3885.2
1994	907.7	483.5	1391.2	4359.2
1995	969.7	425.3	1395	4714.7
1996	901.6	543.3	1444.9	4912.2
1997	828.1	1,496.9	1325	5137.4
1998	646.8	540.7	1187.5	5609.9
1999	619.6	733.1	1352.7	5778.2
2000	713.8	552.7	1266.7	5998.5
2001	712.5	523.3	1235.8	6363.7
2002	735.9	551.5	1287.4	5,545,000
2003	771.4	719.4	1490.8	7228.7
2004	1333.3	672.1	2005.4	8090.7
2005	1877.5	856.2	2733.7	8925.4
2006	2010	707.1	2717.1	10675.4
2007	2498.4	835.7	3334.1	12131.2
2008	2803.3	1060.1	3863.4	15593.4
2009	1945.1	688.4	2633.5	16912.2
2010	**3374.8	**1272.1	**4649.2	*18762
2011	**3681.7	**1388.3	**5074.1	*20476.6
2012	**3949.4	**1489.3	**5443.1	*21965.5
2013	**4288.5	**1617.1	**5910.5	*23851.6
2014	**4573.6	**1724.6	**6303.3	*25437.1

Source: The General Statistics Department, unpublished data

*Preliminary data

** been estimate data by the two researchers, through the calculation of the arithmetic average of the contribution of private investment in total investment for the last five years) 2005_2009) and then hit the percentage of the total investment for the year 2010 to 2014, as well as the case for government investment.

The development of private investment in Jordan as a percentage of the total investment:

Jordan followed in its economic system of the economic system of the mixed capitalist, giving the private sector and its role in the process of growth, with paving the way for the government to intervene if necessary. The origin of economic activity that is normally, the Government intervenes through its monetary policy and finance to solve the problems of economic activity and the economy toward the objectives it seeks to achieve.

With the beginning of the 1980s, the private sector occupies its role properly after the availability of appropriate infrastructure, strong and gave special investment acceptable position inside the Jordanian economy, contributed to the process of economic growth effectively, the proportion of private investment in total investment to about (82.8%) in 1981 and continued private investment good status and rates of advanced growth until 1985, where the rates of private investment as a proportion of the total investment decline again until 1990.

And reached its lowest rate in 1987 (39.2%), and because of the economic circumstances and harsh

Jordanian economy, where the low rate of economic growth and increased the deficit in the balance of trade deficit rose in the budget to Jordan's foreign debt. At the beginning of 1991 and the increased attention by the Government to private sector investments, focus and adoption of investments in the first place, as a catalyst for economic growth through programs of economic adjustment and development plans, returned to the rates of private investment to form the biggest percentage ahead of public sector investments again. In 1996 the ratio of participation of private investment as a proportion of the total investment toward (62.4%), while the reached about (72.6%) in 2014.

Table No. (2)
Government and private investments as a percentage of GDP
As a proportion of the total investment

The Year	Private investment as a proportion of gross domestic product (GDP)	Investment The government as a percentage of GDP	Total Investment as a percentage of GDP	Government investment as a percentage of the Total Investment	Private investment as a percentage of the total investment
1980	25.3	14.6	39.8	36.6	63.4
1981	40.1	8.3	48.4	17.2	82.8
1982	29.4	10.04	39.4	25.5	74.5
1983	24.3	8.8	33.01	26.5	73.5
1984	24.4	5.6	29.9	18.56	81.44
1985	9.4	10.2	19.5	(1,522,022)	48.0
1986	8.3	9.9	18.3	54.4	45.6
1987	7.7	11.9	19.6	60.8	39.2
1988	14.4	7.4	21.8	33.9	66.1
1989	12.7	10.2	22.9	44.6	55.4
1990	15.3	9.8	25.1	39.12	60.88
1991	15.1	7.8	22.9	33.95	66.05
1992	22.3	6.8	29.1	23.35	76.65
1993	26.9	6.6	33.6	19.7	80.3
1994	20.8	11.1	31.9	34.75	65.25
1995	20.6	9.02	29.6	30.5	69.5
1996	18.4	11.1	29.4	37.60	62.40
1997	16.1	9.7	25.8	37.5	62.5
1998	11.5	9.6	21.2	45.53	54.47
1999	10.7	12.7	23.4	54.2	45.8
2000	11.9	9.2	21.1	43.63	56.37
2001	11.2	8.2	19.4	42.35	57.65
2002	10.8	8.1	18.9	42.84	59.46
2003	10.7	9.9	20.6	48.26	51.74
2004	16.5	8.3	24.8	33.5	66.5
2005	21.1	9.6	30.6	31.32	68
2006	18.8	6.6	25.5	26.0	74.0
2007	20.6	6.9	27.5	25.0	0.75
2008	18.5	6.8	24.8	27.4	72.6
2009	11.5	4.1	15.6	26.14	73.86
2010	17.9	6.8	6.8	27.4	72.6
2011	17.9	6.8	6.8	27.4	72.6
2012	17.9	6.8	6.8	27.4	72.6
2013	17.9	6.8	6.8	27.4	72.6
2014	17.9	6.8	6.8	27.4	72.6

Source: were calculated from the data before the researcher.

The impact of the financial and monetary policy on private investment

You should use the monetary policy or financial policy? This question latest long discussion between the supporters of the monetary policy led by Milton Friedman (Milton Friedman) and supporters of the financial policy led by Walter Heller (Walter Heller) but this debate has been overtaken by events, it was decided that the financial

policy and monetary policy, and each of their objectives credentials, the modern debate is should be exercised in the policies being pursued one effects to achieve the same goal or should be one budget remedial tool each other? There is no doubt that both policies monetary, financial and playing a key role in achieving the economic instability, and it is in this spirit that could be coordination between both policies in the economic goals .policy can expansionary monetary play a key role in the increase in gross domestic product and reducing the interest rate. While fiscal policy plays a key role in increasing gross domestic product and raising the interest rate. There is a relationship of mutual assistance and the nexus between fiscal and monetary policies. We can distinguish between the monetary policy of the financial policy of the inclusion of the tools that are designed to influence the monetary offer both cost and cash to play its role in economic activity and the inclusion of a second income of taxes and duties and debt management and public expenditures.

The economic balance (Absence of the contraction or inflation) can be monetary policy anti-or neutral fiscal policy, the government can if desired in expanding the credit to the central bank to reduce the rate of the discount, and vice versa also if it wanted to restrict credit can increase the rate of the discount, but the budget policy and cumbersome it is awaiting the vote for a long time and it is better that the monetary policy must be moving in the same direction of financial policy supplemented and supported by the reasons for this are:

1. Should the use of monetary policy to control the cash block in circulation, but not sufficient to achieve that must be the use of financial policy and wage policy, prices, income as long as it is a requirement of the effectiveness of monetary policy in the creation of the necessary financial resources for investments through borrowing, individuals to be ready to accept the price levels of different interest rates and the degree of competition with private investment, and the same note when you use the financial policy alone to stimulate private investment and reduction of government expenditure or the year this could lead to a decline in this type of investment instead of an attempt to increased, especially in the developing countries experiencing the dependency of the economies of the industrialized countries, this means that reliance on monetary policy to encourage investment and control in the rate of exchange and economic stability .

2. Could not monetary policy alone to bear the damage and trauma in the fight against inflation and must be the integration of the interdependence of the financial policy in these matters as it requires the use of the instruments to influence on the demand side, this task of the financial policy.

3. Experience has shown that when prevailed recession in the 1970s in the major industrial countries resorted to the economic authorities in these countries to use all of the two policies together to get out of this crisis.

As experience has shown that coordination between the two policies in terms of the direction and the timing of it is necessary for the State cannot neglect, because condone this means to miss the chance to that State to achieve the desired goals.

It also calls for the urgent necessity of coordination between the Saudis and the fiscal and monetary policies in all economic conditions, so that the financial policy of the Government as the executive authority and in particular the Ministry of Finance or Economy, either the monetary policy of the competence of the Monetary Authority, in particular the central bank, therefore, to achieve the desired objective of the State be necessary coordination between those two bodies, where the use of both the financial policies and monetary policies in the same time to achieve economic stability.

Therefore, there is no doubt that the effectiveness of each of the policies of the financial and monetary depended on the degree of the slope of the curve is the market for goods and services) curved LM market (money), the slope of the curve is the market for goods and services) is largely determined by the internal investment function, if businessmen do not respond rapidly to changes in the rate of interest the investment function be steep and thus be a curve is the market for goods and services) steep, furthermore, steep curve LM (market money) depends mainly on the slope of the curve of requesting money if individuals respond quickly to changes in the rate of interest, a function of cash preference be small steep hills and the nearest to the equator, thus the curve of LM (market Money) Relatively surfaces accordingly, fiscal policy would be a powerful tool if businessmen do not respond to changes in the rate of interest when the report of their investments, but strongly respond to changes in the rate of interest when determining the amount of cash balances which keeps for the amount of entering the situation where the financial policy ineffective be curve is the market for goods and services) surfaces while the curve LM market (money) be steep, because the individuals affected by the changes to the interest rate at the report of their investments, investment function be relatively flat and therefore the curve is the market for goods and services) be relatively level, while individuals do not respond to changes in the rate of interest when the report of the amount of cash balances which keeps by any that the function of liquidity preference be steep, Thus, LM also be too steep.

Thus, if the economy is suffering from recession is following the policy of fiscal expansionary so that the State increased government spending or reduce taxes which would lead to the increase of the overall expenditure and is at the same time the application of the policy of the expansionary monetary and which lead to a decline in

the rate of interest which lead to increased investment and rising aggregate demand.

If the economy suffers from inflation is to follow a financial policy contractionary so that the State reduction of government expenditure or taxes increase, leading to a reduction in the total demand and is at the same time the implementation of the policy of deflationary monetary and leading to an increase in the interest rate leading to a decline in investment and low aggregate demand.

Investment Obstacles in Jordan:

If we want to dwell a bit inhibiting factors, which limit the process of private investment, the talk about the following:

1- The lack of capital and higher costs: Jordan suffer from weaknesses in the financial resources needed to finance investment. To cover the financing investments resorts to the Government or the private sector to borrowing whether internal or external. Often loans high benefits, which increases the cost of investment, one of the major obstacles to reduce the rates of investment in Jordan, and plays workers' remittances play a major role in the coverage of a significant part of the investment funds.

2- The scarcity of natural resources: Jordan is a country that is not only a few natural resources utilized by the almost confined to the subjects of phosphates and potash, the intervention of these articles as raw cheap in some industries.

The existence of a variety of natural sources lead to an increase in investment opportunities to benefit from these resources, and reduces the chances of monopoly and control in the price, which does not apply to the Jordanian situation.

estimation of the impact of the financial and monetary policy

On private investment in Jordan and the conclusions and recommendations

The study model:

Will choose a simplified model in this study to include six variables: Private Investment (I), the gross domestic product (GDP), public expenditure (government) (G), the direct taxs (T) to represent the financial policy, as well as the use of the interest rate (R), the money supply in its broadest sense (M2) to represent the monetary policy, to analyze the impact of fiscal and monetary policy and on private investment in Jordan. Will be linked, including in the form of a model VAR,Vector Auto Regression) reduced scope as follows:

$Y_t = A_1 Y_{t1} + A_2 Y_{t2} + ... + A_n Y_{t-n} + U_t$

Where:

$Y_t = [I_t \ GDP_t \ G_t \ M2_t \ T_t \ R_t]$

A_i: a matrix of transactions

U_t: matrix random error where:

$U_t = [e_{1t} \ e_{2t} \ e_{3t} \ e_{4t} \ e_{5t} \ e_{6t}]$, with the assumption that the expected value of each 0, and there is not a sequential coherence in any of them, $E(e_{it} \ e_{it-s}) = 0$.

T: Time

N: Number of periods (Lags) .

In this model was considered private investment was the variable of the rest of the variables of the study are independent variables.

It is a model (VAR) of modern methods of study of the relationship between macroeconomic variables. Where this way of expression of all variable model written as a function of the changing values himself in previous periods and the values of the other variables of the model in the previous periods. All of what the two researchers in this model is: (Johanson, 1997)

1. determining variables that is expected to interact with each other in the model of the study. Of course there is no external variables in a model (VAR) where treat all variables as internal variables, which selected based on economic relations of mutual trust between the variables by economic theory.

2. The number (Lags).

3. Granger Causality Test.

4. Unit Root Test.

5. Variance Decompostion .

6. Impulse Response function .

The results of the analysis standard:

It has been the application of previous tests on the variables of the study, the following are the results of the Standard tests obtained:

First: Unit root test: (Test Dickey _ expanded Voller ADF)

Applying this test to the Model variables, considering that the number of sightings (n) equal (35). Taking the

absolute value of the results indicate that all the variables unstable at the level I(0) where the gross domestic product (GDP) and government spending and stable monetary when the second difference I(2), either private investment and the interest rate and direct taxation is stable at the difference I(1). Table No. (3) values **(ADF)** calculated and potential complementarities of the variables used in the model are as follows:

Table No. (3)
The results of the test of Dickey _ The expanded Voller (Augmented Dickey-Fuller) (ADF)

The second difference I(2)			The difference I(1)			The variable
The Result	Contingent liabilities	The value of the DF calculated	The Result	Contingent liabilities	The value of the DF calculated	
....	....	....	Stable	0.000	-6.510	**I**
Stable	0.000	-11.800	Unstable	0.829	-0.711	**GDP**
Stable	0.000	-10.600	Unstable	0.842	-0.662	**M2**
....	....	....	Stable	0.005	-3.907	**R**
Stable	0.000	-9.504	Unstable	0.617	-1.298	**G**
....	....	....	Stable	0.000	-4.898	**T**

Source: the preparation of the two researchers

Secondly: Test number of idle periods (Lag Length)
To test the number of periods of idling appropriate timetable to each variable being self-slide each variable for a period of delay one after the other until obtaining the model best criteria to test the model through the use of test (Akaike) and (Schwartz), through the selection of less than the value of two criteria. When the holding of these two tests on the annual data found that less than the value of the is when the number of idle periods a timetable (Lags) = (3).

Table No. (4)
Test Akaike and Schwartz (AIS , SC)

SC	AIS	Lags
78.88698	78.61215	0
71.57468	69.65091	1
70.91074	67.33801	2
70.53550*	65.31381*	3

Source: the preparation of the two researchers

Thirdly: Granger Causality Test
In the application of this test was the results are as shown in the table No. (5).

Table No. (5)
The results of the test of causation

The Result	Contingent liabilities	F	The direction of the causal link	The Result	Contingent liabilities	F	The direction of the causal link
Cause	0.0002	12.014	I / G	Cause	0.015	4.852	G / I
Not Cause	0.522	0.664	I / GDP	Cause	0.005	6.388	GDP / I
Not Cause	0.390	0.972	I / M2	Cause	0.002	7,300	M2 / I
Not Cause	0.147	2.048	I / R	Not Cause	58.917	1.998	R / I
Cause	0.005	15.463	I / T	Cause	0.030	3.966	T / I

Source: the preparation of the two researchers

       Drawing on the value of the contingent to judge the results of the test of causation, if the value of the contingent of less than 5% in both directions mean that there is a causal relationship reciprocal any that each causing the other.
       It is clear through extrapolation of the figures in table (5):
1. There are bilateral relationship between private investment and government spending any that each causing the other.
2. there is a single trend between private investment and gross domestic product (GDP), that the gross domestic product (GDP) cause private investment.
3. there is a single trend between private investment and criticism, any that the presentation of the IMF cause private investment.
4. No causal relationship between any direction between the interest rate and private investment.
5. There is a bilateral relationship between private investment and direct taxation, each causing the other.

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Fourthly: Co_integration Test
So that we can hold joint integration must be variables stable study the same class I(1) .since the test the root of
unity among us that the variables stable at various degrees, we can not test common integration in this situation.
The absence of a complementary relationship between the variables in the long term does not mean that
there is a relationship between the variables in the short term, therefore, will be the use of the analysis of the
components of the variance a respond to the backlash by the statement of the relationship between the variables,
and their importance in the description of the behavior of the model and giving forecasts to decision makers.

Fifthly: Variance Decomposition
The importance of the analysis of the components of the variance in that it gives the relative importance of the
impact of the sudden change in each variable model to all variables in the model.

The analysis of the components of the variance of investment:
When applying this test to the variables in the model shows us table No. (6) Private investment is strongly
influenced by changes in the gross domestic product (GDP) and government spending and IMF, as well as interest
rate and taxes but to varying degrees, this is evident through attrition in the interpretative declarations for
investment through exposure-time to increase the strength of the interpretation of the changes in the model
variables.
Where it is clear that private investment explain the rate (100%) of himself during the first year, then
force starts interpretative declarations decreasing up to about (39.61%) in the fifth year, and (28.45%) in the tenth
year.
On the other hand, we find that the change in real GDP explains about (32.97%) in the fifth year, and
(29.02%) in the tenth year of the wrong forecast in investment.
With regard to the presentation of the IMF and the interest rate _The representatives of monetary policy
_ we find that the presentation of the IMF interpreted or (15.28%) in the fifth year in spite of the increase of these
percentage in the following years but this ratio decreased to reach (17.48%) in the tenth year. The rate of interest
was interpreted slightly as interpreted or (2.71%) in the fifth year (10.89%) in the tenth year. This refers to the
effectiveness of monetary policy in the impact on investment in the short term.
With regard to government spending and direct taxation _ the representatives of the financial policy _ we
find that government spending interpreted the rate (2.03%) and (7.32%) in the fifth year and 10th respectively of
the wrong forecast in investment. Interpreted direct taxs rate (7.39 %) and (6.84%) in the fifth year and 10th
respectively of the wrong forecast in investment. Demonstrating the effectiveness of the financial policy in the
impact on private investment.

Table No. (6)
The analysis of the Variance Decomposition for investment

Variance Decomposition of I:

Period	S.E.	I	GDP	G	M2	R	T
1	212.0877	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	300.9272	70.39988	16.72462	0.000807	7.449799	1.215608	4.209277
3	360.0587	52.00017	28.11565	0.996769	9.886850	3.019973	5.980589
4	391.6475	45.55827	29.08243	1.830759	13.41505	2.655520	7.457977
5	423.3627	39.61481	32.96905	2.030672	15.27827	2.713177	7.394018
6	443.7537	36.71490	34.11547	1.900155	16.62140	3.683089	6.964994
7	458.3464	34.87015	34.05887	1.902445	17.58415	5.051012	6.533371
8	472.5930	33.06017	33.26113	2.522167	18.02980	6.853723	6.273015
9	488.9482	30.99734	31.50898	4.215139	18.00937	8.936598	6.332561
10	510.6958	28.44916	29.01620	7.320400	17.48086	10.89746	6.835922

Source: the preparation of the two researchers

Sixth: Impulse Response Function
A. A function of the response from the reaction of the private investment to changes in the gross domestic product
(GDP):
Note of the figure (7) in response to the reaction of each of the Model variables and found that the impact of the

GDP would positively affect the private investment and the level of moral passable, where this influence on the length of the period. Note that this result correspond with the result of the analysis of the components of the disparity which between the increasing force interpretative declarations of GDP in the predictability of the Error output in private investment over time, this result agrees with the study (Ahmad Badawi, Sudan, 2008) which indicated the presence of a positive relationship directly between GDP and private investment.

This will answer the question the assumption of the first research that there is a direct relationship (positive) Statistical indication of moral between GDP and private investment.

B. A function of the response from the reaction of the private investment to changes in the rate of interest:

Through testing shows us that any random shock in a variable interest rate negatively affect on private investment and the level of moral passable, where the impact of the third year and the length of the period. Note that this result correspond with the result of the analysis of the components of the contrast, in line with the results of a study Haiyan County and Liu (Haiyan Song and Zinan LIU, 2001) and the study (James 2009), which pointed to the existence of a negative relationship between the interest rate and private investment. Thus clear to us question the second hypothesis that interest rate a negative impact on private investment and moral significance.

C. A function of the response from the reaction of the private investment to changes in the presentation of the money supply:

For the impact of the IMF, it is clear that any random shock in the variable monetary offer positively affect the private investment and the level of moral passable, where this influence on the length of the period. Note that this result correspond with the result of the analysis of the components of the variance and testing the causation dialing the existence of unilateral relationship between private investment and any criticism that the presentation of the IMF affect the private investment. Concurs with the results of a study (James 2009), which pointed to the existence of a positive relationship between the IMF and private investment, and thus the question of the third assumption shows that the impact of the IMF on private investment with a positive indication of moral statistical.

D. A function of the response from the reaction of the private investment to changes in government expenditure:

It is also apparent from the figure that any shock random variable in government spending would positively affect the private investment and the level of moral passable, where the impact of the seventh year then begin to recede, note that this result correspond with the result of the analysis of the components of the disparity which between the increasing force interpretative declarations of government spending in the predictability of the Error output in private investment over time. That answered the question of the fourth premise that the impact of government spending on private investment with a positive indication of moral statistical, in line with the results of a study Haiyan County and Liu (Haiyan Song and Zinan LIU, 2001) and the study (James 2009) and study (Zyadat, 2000), which pointed to the existence of a positive relationship between government spending and private investment.

E. A function of the response from the reaction of the private investment to changes in direct taxes:

As for the impact of direct taxes on private investment during the study period, it was clear that any shock random variable in the direct taxes have a positive impact on private investment, and extends this impact to the first six years and then start the negative impact which extends along the period this is in conformity with the result of the (Haiyan Song and Zinan LIU, 2001), which pointed to the existence of a negative relationship between direct taxes and private investment. Thus last assumption of this research shows that the direct taxes a negative impact on private investment and moral significance.

figure (7)
A function of responding to the backlash by private investment and the variables of the Model (gross domestic product (GDP), government spending, interest rate, and criticism, direct taxes)

Response I to Gdp

Response I to R

Response I to M2

Response I to G

Response I to T
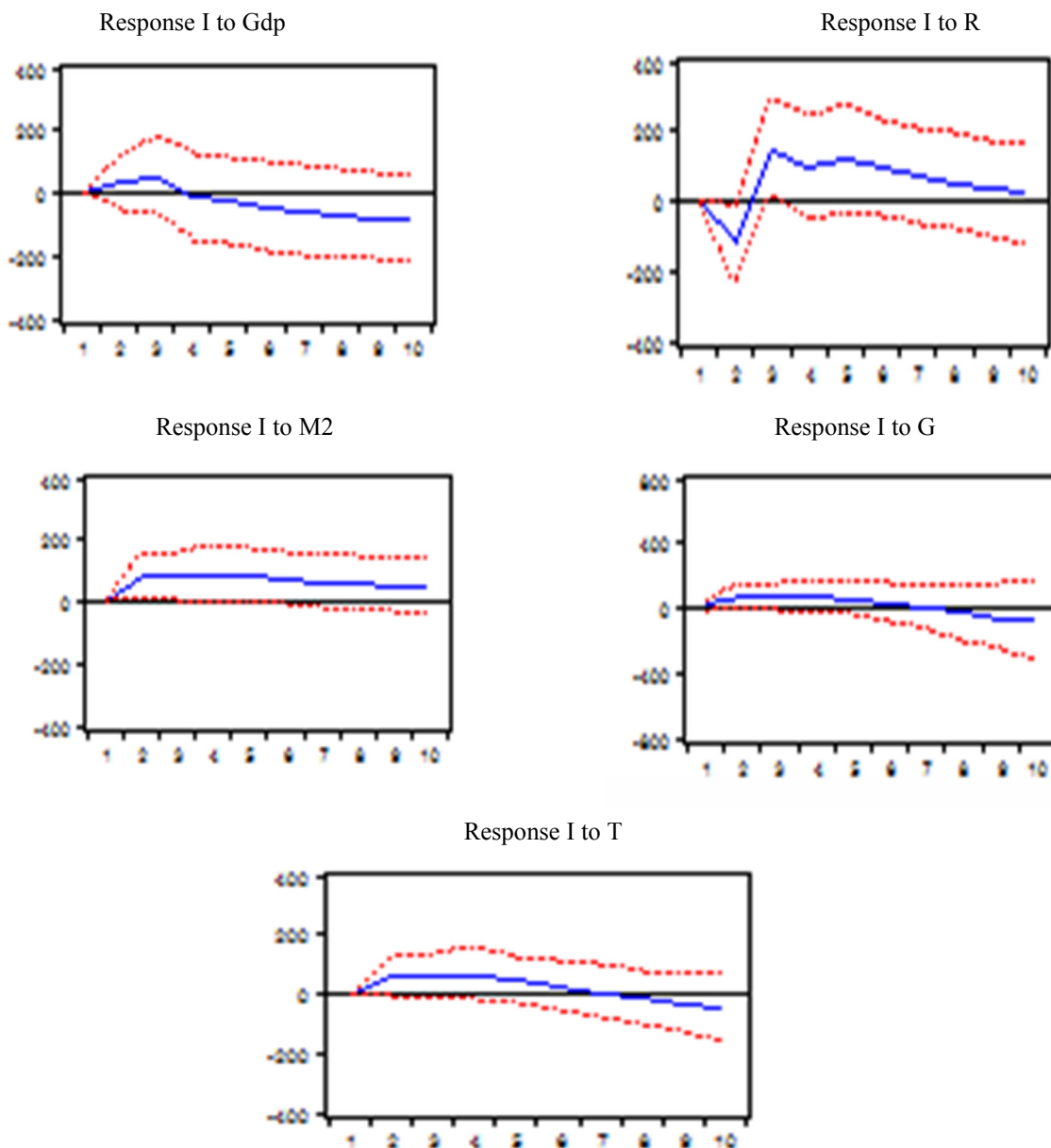
Conclusions and recommendations

The results

The aim of the study to the analysis of the development of private investment in Jordan during the period (1980_ 2014) and determine the form of the relationship between the private investment and a group of influential factors such as (gross domestic product (GDP), the money supply, and the interest rate, government spending, direct taxes). The two researchers reached in this study to the following results:

1. Despite the difficult conditions in which the Jordanian economy, but the volume of private investment has been characterized by increasing unstably V contains rise year or consecutive years and years or consecutive years, but the general trend was increasing.

2. when calculating the rates of growth of private investment shows that investment achieved the average growth rate (2.13%) during the study period.

3. By testing the unit root time series in the study, it was clear that all of the gross domestic product (GDP), government expenditure (G), the IMF (M2) all stable at the second difference I(2), while private investment (I), and the interest rate (R), and direct taxation (T) stable at the difference I(1).

4. Test Shows Granger Causality Test with that there is a bilateral relationship direction (reciprocal direction) between private investment and government spending any each other causes, as well as there are bilateral relationship between private investment and direct taxation. As the test showed that there is a single direction between the gross domestic product and gross domestic investment, that the gross domestic product (GDP) cause investment, also shows that there is a single direction between the IMF and investment, that the presentation of the IMF cause investment.

5. The results of the analysis of the components of the variance that the presentation of the IMF, direct taxation and play a larger role in the interpretation of the fluctuations on private investment, this is evidence of the importance of these instruments in influencing the investment decision, where the force reached interpretative declarations of these variables in their interpretation of changes in the Mediterranean Investment (14.86%), (6.44%), while the proportion of the interpretation of each of the government expenditure, and the interest rate small and uneven not interpreted significantly wrong forecasts in private investment.

6. test showed a function of responding to the backlash of the act that any sudden change in both the IMF and government spending and gross domestic product (GDP) and a positive impact for several years to come on private investment and the occurrence of any sudden change in each of the interest rate and direct taxation affects negatively on private investment in Jordan.

7. Each of fiscal and monetary policy affecting private investment in Jordan, but the results showed the standard analysis of the effectiveness of monetary policy with a strong impact on private investment in the short term, while the impact of the financial policy in influence on private investment in Jordan in the long term are more effective than the monetary policy.

Recommendations:

In the light of the above findings, the survey could provide a set of recommendations which can be summarized as follows:

1. In view of the importance of the investment in the process of economic growth and economic development should focus on increasing interest in investment, especially private investment and activating its role in increasing productivity and diversification of the economic base to produce goods and services can compete in domestic and foreign markets.

2. follow the appropriate policy toward economic variables and incentives to increase the volume of investments, particularly private investment, such as the reduction of interest rates and the attempt to control inflation.

3. The need for coordination between the financial and monetary policy to influence in private investment.

4. The continuation of financial authority represented the government in general, Ministry of Finance, in particular, under the guidance of the financial policy toward the strengthening of both sides of the aggregate demand and supply macroeconomic stability through the removal of barriers to the private investment expenditure domestic and foreign investment.

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