

## Determinants of Fiscal growth in Jordan

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### Abstract

This study aims to attempt to measure the direction of the causal relationship between the rate of Fiscal growth in Jordan and among some independent variables that are believed to affect it: the size of the available liquidity in the banking system, the proportion of credit extended to the private sector as a whole, the volume of market capitalization money, and the Fiscal policy of governments. To achieve the objectives of the study and to test its premise, a time series of historical data available for the study variables during the period of 1982 – 2010 has been used.

The study found the presence of a range of causal and positive statistical relationships and a two-way between three independent variables: the size of the available liquidity in the banking system, the proportion of credit extended to the private sector as a whole, the volume of market capitalization money, and with the Fiscal growth rate, while an impact of the government's Fiscal policy on the dependent variable has not been proven.

The study recommended a set of recommendations that are believed to affect the Fiscal growth rate of Jordan, notably: encouraging mergers between local banks, reconsider the legislation of intellectual property rights and standards of Fiscal disclosure practiced by local Fiscal institutions, and finally try to link the orientations of the governmental Fiscal policy trends with the local economic growth, and coordinate the relationship and organize it with the requirements of the monetary policy.

### Introduction

The Fiscal literature show that the markets play an important role in increasing economic growth rates in the country, and the source of this belief is what capital funds provided by these markets to benefit a large segments of the business sectors on one hand, and the profits and benefits it provides to the providers of these funds on the other hand.

The Fiscal markets and its developing role, became one of the important topics that are researched, because of its effective role in modern economies, and its impact on the global economy, so these markets became a mirror that reflects the economy being in the state of an increase or a slowdown in its growth rates .

And because these markets are a point of converge of all business and Fiscal sectors, as the business sector produces goods and services and the Fiscal sector finances that production, therefore, the greater the production volume, the greater increase of income, thereby increasing returns to the capital markets, which is reflected by an increase in the GDP and therefore a growth in the national economy.

### The importance of this research

The importance of this research falls of the applied importance covered by this subject, and the rarity of local studies that examined the relationship between the development of Fiscal markets and their impact on increasing the rate of productivity of the economy of the Fiscal growth in Jordan, and this research is an important attempt to identify the orientations of the relationship and the variables of this study.

### Research problem and its elements

There is a belief that is reinforced by Applied Studies conducted in many countries of the world, about the positive causal relationship between growth indicators and its Fiscal impact on the rate of the general economic growth represented by the Fiscal growth rate, and even though the Jordanian Fiscal sector including by what banks and Fiscal institutions it represents, is theoretically developed, however, its share is still limited in the economic growth in Jordan, and the belief in the necessity to research between the variables of Fiscal growth and the rate of economic growth in Jordan derives from this.

Accordingly, the research attempts to answer the following questions:

- Is there a statistically significant relationship between the percentage of available liquidity in the banking sector and Fiscal growth rate in Jordan.
- Is there a statistically significant relationship between the rates of credit extended to the private sector and between the rates of Fiscal growth in Jordan.
- Is there a statistically significant relationship between stock market indices and Fiscal growth rate in Jordan.
- Is there a statistically significant relationship between government fiscal policy and Fiscal growth rate in Jordan.

## Research objectives

The research aims to answer the following questions:

- Measuring the direction of the relationship between the percentage of available liquidity in the banking sector, and the rate of economic growth in Jordan.
- Measuring the relationship between the rates of credit extended to the private sector, and between the rates of economic growth in Jordan.
- Measuring the relationship between stock market indices and the rate of economic growth in Jordan.
- Measuring the relationship between the government's fiscal policy and the rate of economic growth in Jordan.

## Hypotheses

In order to answer the questions of the study and achieve their goals, the study tries to test the following hypotheses:

HO1: There is no statistically significant relationship between the percentage of available liquidity in the banking sector and the rate of economic growth in Jordan.

HO2: There is no statistically significant relationship between the rates of credit extended to the private sector and between the rates of economic growth in Jordan.

HO3: There is no statistically significant relationship between stock market capitalization and the rate of economic growth in Jordan.

HO4: There is no statistically significant relationship between government fiscal policy and the rate of economic growth in Jordan.

## Study literature:

The causal relationship between economic growth and Fiscal development; is considered one of the most controversial issues in the economy, and interest has been growing in them during the last decade and the debate was mainly about whether economic growth is leading to the growth of the Fiscal sector or vice versa.

(Goldsmith, 1969) and before (Schumpeter, 1912) described the nature of the relationship between Fiscal development and economic growth, but because of the sensitivity and importance of this relationship there is still a growing interest that pushes researchers and specialists towards studying causal factors of development, and distribution of Fiscal services in the country. (McKinnon & Shaw, 1973) also noted that the importance of having an effective Fiscal system ensures an improvement in the gains of the economic growth.

And (Lynch, 1996) showed that the analysis of McKinnon and Shaw has been influenced by a variety of contradictory factors, which affected the shape of the relationship between Fiscal development and the increase of applied studies that look at this relationship. Therefore some researchers developed a set of models of Fiscal development, which help to understand the idea of the role of the Fiscal sector in economic growth (Fry 1982, 1995, McKinnon, 1991, and the World Bank, 1989.), And in the opposite direction, a tendency emerged by skeptics towards this relationship when that model was used in developing countries with least development (Lucas, 1990).

The functional relationship between the Fiscal system and economic growth has shown (Levine, 1997) that comparing the Fiscal structure used in advanced industrial countries with economic growth, tends to consider that the Fiscal structure is ineffective, and not linked to the level and rate of economic growth. But before that, (Outreville, 1922) showed that there is an important relationship between the Fiscal capacity in the insurance market and the market structure in those countries.

But (Levine, 1997) showed that there are analytical problems that emerged when the Fiscal development was linked to the economic performance in the country, and (Kindleberger, 1974,1985) adds that some of the factors that have been better studied in this criteria, were behind some difficulties that prevented without obtaining the quantitative assessment of variables.

On the other hand, some theses show that the Fiscal system is associated with a set of non-Fiscal elements affecting economic performance. Here (Merton, 1992 & Bencivenga) sees that there is a need to take into account the Changes of Technology, However, (Smith, 1991) takes the Fiscal Policies such as government Fiscal Policy, and the legal system and political changes and the development of human resources which may also affect the shape of the relationship between the Fiscal development and the economical development (LaPorta et al, 1996).

On the other hand, applied experiments showed that the developed countries were able to find a model that explains its Fiscal development and links it with the Supply-Lading Approach, which considers that the offer leads the causal relationship to economic growth. (Fritz, 1984; Jung, 1986; Dee, 1986), and to achieve this approach some countries have created new Fiscal institutions to achieve Fiscal development and therefore economic growth, which deems more effective than the Demand Following Approach. (Fry, 1982, 1995: McKinnon, 1991: and World Bank, 1989).

This approach leads to a real growth, while the pattern of Demand Following does the contrary, where the supply approach improves the demand for Fiscal services later, but initially it is associated with finding services with no effective demand. Therefore, when real Fiscal development happens, the Demand approach is considered a strong motivator gradually, but becomes less important later, and the preference goes to the Demand approach, which later becomes dominant (Patrick, 1966:177).

Finally, most theoretical literature showed that the relationship between Fiscal development and economic growth came from the fact that the availability of a developed Fiscal system will perform a range of effective functions that enhance the efficiency of the intermediaries in the economy, which is reflected on: reducing information costs, the costs of speculation, and the costs of control.

In short, that macroeconomic stability is an important factor for the growth of the Fiscal sector, hence why the countries should adjust its macroeconomic policies, which they use to promote the competition in the Fiscal sector, and tries to develop a legal and institutional framework, transparent and robust activities of the Fiscal sector, in particular through working to find the instructions and a more rational supervision, and guarantees the rights of creditors, and gives Fiscal operations more credibility.

#### **Fiscal growth and stimulating the economy:**

Fiscal markets are one of the three markets that make up the local economy, in addition to the market of goods and services, resource market, and the Fiscal market is linked to these markets through the funds it provides, directed to the production of goods and services necessary for the economy.

Therefore the Fiscal markets are considered Fiscal institutions through which provide the savings of these institutions, to institutions seeking loans of production and services, and therefore the Fiscal market is characterized by the following:

- 1) Helps to absorb the savings held by society and directs it towards various projects.
- 2) Helps productive entrepreneurs in getting the necessary funds for these projects.
- 3) Allows the country an opportunity to apply more rigorous policies, the fiscal and monetary policies, because the market offers information on the movement of funds and trends and quantities traded.
- 4) Helps to attract foreign savings to the inside, so that works to bridge the gap between the high demand for money and the available supply.
- 5) Fiscal markets that are active and developing are mirrors that reflect the level of the economy in terms of the level of growth, and the degree of development.

Depending on the above, it has become modern in the modern economy for Fiscal markets; occupies an importance and roles that significantly stimulate economic sectors, and raises the productivity of the economy, both goods and services, and all that, because of the provided funding for these sectors, which are summarized as follows:

- 1) When businesses receive the funds necessary for the operation of the Fiscal market, they increase the scope of their work and expand their production.
- 2) Businesses are considered as agreement units in the Fiscal market, compared to savings units that provide those funds for a commission for the submission of such funds, either in the form of dividends or interest bonds, and thus those savings add additional revenue increase of their income, which is reflected positively on the National income and thus the economic growth.
- 3) The broad activity of the business sector and its prosperity; leads to an increase in the rate of operation and thus lowers the unemployment rate, which leads in the final outcome to an increase in the incomes of individuals, and its impact on national income and economic growth.
- 4) The broad activity of the business horizontally and vertically; increases the country's tax revenue on dividends and bonds, in addition to the income taxes on the income of individuals employed in those sectors, and thus increasing the country's revenues. The organizational nature of stock companies is an important way to prevent tax evasion for individuals whose incomes are not linked to companies.

#### **Fiscal growth and providing liquidity:**

The size of the Fiscal liquidity provided by the Fiscal markets, to the business sector and the government sector, has a decisive and influential role on the economic growth, and in the light of the affecting relationship between the Fiscal market and economic growth, where this effect is measured through the ratio of Fiscal market capitalization to the GDP.

The relationship shows that market capitalization represents the value of the shares of listed companies in the Fiscal market, depending on market prices, when the capitalization to GDP increases, the power of the impact of this market on the rate of economic growth increases, and vice versa when these ratios decrease.

And clearly, the efficiency of the market plays a key role in the effectiveness of the Fiscal market, which is characterized by the following:

- 1) Means the efficiency of the market equal the real value of the investments with the market price.
- 2) In the light of market efficiency, the current price of the security is the best value during a certain period.
- 3) The market that is always efficient is in a constant state of balance.
- 4) Information is quickly and randomly reflected in the prices of investments.
- 5) In the light of market efficiency it's not easy to make extraordinary profits, depending on the information available in the market because this information has already been reflected in the price.

Various studies indicate that the economic factors leading to the success of the Fiscal market may be present in the economically developed countries more than the rest of economies, so that they are influential in economic growth, and therefore the influence of Fiscal markets on economic sectors varies, depending on their degree of development that is characterized by the following:

- 1) Mature markets, are markets that reached a level of sophistication in terms of the amount of volume, and the diversity of investment instruments and the proportion of efficient markets, such as the United States, Japan, England, Germany and France.
- 2) Emerging markets are markets characterized by a level of relative efficiency, less than it is in mature markets, such as Southeast Asia.
- 3) Emerging markets are markets characterized by a relatively low trading volume and restricted to a limited number of Fiscal instruments, and features low relative efficiency, such as the markets of developing countries and Arab countries.

#### **Methodology of the study:**

The studies carried out by (King and Levine, 1993a, 1993b) from 1960-1989 are considered as one of the most important applied studies by many countries, which looked into determining the orientation of the causal relationship between Fiscal development and economical development. Researchers have used a number of metrics that reflect the Fiscal development, such as: the average liquid assets of the Fiscal system as a proportion of GDP in real terms, average credit allocated to the private sector as a proportion of total domestic credit, and the average bank credit as a proportion of total borrowing, they also used a number of metrics that express economic growth, such as: the average per capita income, and the average education, in addition to a group of indicators that reflect the exchange rate, trade, fiscal and monetary policies, and the study reached results that supported the hypothesis, which dictates that the Fiscal development positively impacts economic growth.

The study of (Murinde and Eng, 1994) tried to examine the relationship between Fiscal development and economic growth using time series analysis and Cointegration using the Vector Auto correlation (VAR) duo approach, and in this study, he used measures of Fiscal development M1, M1 and M3, currency in circulation outside the banking system as a proportion of the money supply M1, M1 and M3, while he used the GDP as a measure of economic growth, and the study found a result that supports a causal relationship from one direction, as the Fiscal development leads to economic growth.

The study of (Gregeio and Guidotti, 1995) adds that there is an impact of the development of the Fiscal market on the rate of growth in high-income, medium and low income countries, and the study used measures of bank credit to the private sector as a percentage of the gross domestic product (GDP) for the expression of Fiscal development. The results showed that the development of Fiscal markets has no effect on economic growth in high-income countries, while has had a positive impact on economic growth in countries with low-and middle-income.

The study of (Demetriades and Hussein, 1996) was conducted on 16 developing countries, and used variables assets of deposits and money supply M2 as to gross domestic product to reflect the Fiscal development, the average real income per capita was a measure of economic growth, and the results that were reached were varying in terms of causality tests between Fiscal development and economic growth, in about 50% of the countries, it was shown that there is a causal duo relationship, and the results of the last half indicated to a causal relationship in one direction, from economic growth to Fiscal development, and the study of (Levine, 1997) added that Fiscal development positively affects economic growth.

And the study of (Kar and Pentecost, 2000) that studied in testing the relationship between Fiscal development and the growth rate in Turkey reached varied results. When using the money supply as a proportion of GNP as a measure of the of Fiscal development, the results show the causal relationship of the Fiscal development towards economic growth, but after using the variables of bank deposits and private credit and domestic credit as a proportion of gross national product, it indicated to a causal relationship of economic growth towards Fiscal development.

Many of the researchers have tried to determine the nature of the relationship and carried out several research studies in this framework, which can be divided according to the direction of the relationship to 4 main groups:

1. Fiscal development causes economic growth: It suggests some analyzes that Fiscal development is one of the reasons of economic growth, since the establishment of Fiscal institutions and markets increases the availability

of Fiscal services, Fiscal sector increases the savings put to productive investments, and so can the development in the Fiscal sector urge economic growth.

2. Economic growth causes Fiscal development: It assumes some analysis and a causal relationship going from economic growth to Fiscal development, this hypothesis emphasizes the negative role of the Fiscal system, According to this view, the development of the Fiscal sector happens aggregate to the economic activity overall, as the economic expansion requires additional services and Fiscal instruments, Fiscal system adapts itself with the Fiscal needs of the real sectors, so this kind of Fiscal development plays a negative role in the growth process.

3. Correlation, which is based on the existence of a correlation between Fiscal sector development and economic growth, economic growth makes the development of a profitable Fiscal intermediation system. The establishment of an effective Fiscal system allows rapid economic growth, it is through specialization in fundraising and diversification opportunities and liquidity management and project evaluation, and surveillance are all factors in improving the efficiency of capital allowances and increases the productive capacity of the real sector. At the same time, the technical efficiency of the Fiscal sector increases with its size, because heavyweight economies greatly influence the activities of Fiscal intermediation, and as a result, the real sector can always depend on the Fiscal sector through the volume of savings, so the Fiscal development and economic growth affect each other positively in the development process

4. The fact that the Fiscal sector is completely independent of economic growth, and therefore none of them affects the other, and most researchers did not find a meaningful relationship between the evolution of the Fiscal sector and economic growth in some countries.

Depending on the above, this study tests and measures the causal relationship between Fiscal factors affecting economic growth in Jordan during the period from 1982 - 2010, and as this study assumes, the Fiscal growth is a function in a range of variables specified in the study model after taking the change formula of the logarithmic variables of The Independent:

$$\ln Y = A + \alpha_1 t + \alpha_2 \Delta \ln L + \alpha_3 \Delta \ln C + \alpha_4 \Delta \ln Z + \alpha_5 \Delta \ln F \Delta$$

Where: Y rate of economic growth in Jordan measured by Fiscal growth ratio, t time, L ratio liquidity available in the local banking sector of the total assets, and C credit ratio granted to the private sector as a percentage of total credit, Z value capitalization in the stock market, and F is the policy

**Descriptive statistics:**

| standard deviation | Average      | N         | Variable              |
|--------------------|--------------|-----------|-----------------------|
| <b>0.5075</b>      | <b>8.657</b> | <b>28</b> | <b>Liquidity</b>      |
| <b>0.7617</b>      | <b>1.432</b> | <b>28</b> | <b>Credit</b>         |
| <b>0.1001</b>      | <b>0.064</b> | <b>28</b> | <b>Capitalization</b> |
| <b>0.6752</b>      | <b>1.28</b>  | <b>28</b> | <b>Fiscal Policy</b>  |
| <b>0.5643</b>      | <b>0.983</b> | <b>28</b> | <b>Fiscal growth</b>  |

The results indicate that the rate of economic growth in the Fiscal sector during the study period was about 98%, and the average growth of liquidity in the Fiscal sector for the same period is about 865%, and the growth rate of the volume of credit granted to the private sector as a percentage of the total credit is 143%, while the ratio of capitalization to gross domestic product (GDP) in average is about 6.4%, while the rate of growth in fiscal policy, during the period was 128%, and the Fiscal growth rate overall was approximately 98.3%.

**Table 2: the correlation matrix between the variables of the study**

| Fiscal growth | Economy productivity | Fiscal Policy | Capitalization | Credit       | Liquidity    |                             |
|---------------|----------------------|---------------|----------------|--------------|--------------|-----------------------------|
|               |                      |               |                |              | <b>1</b>     | <b>Liquidity</b>            |
|               |                      |               |                | <b>1</b>     | <b>0.646</b> | <b>Credit</b>               |
|               |                      |               | <b>1</b>       | <b>0.765</b> | <b>0.454</b> | <b>Capitalization</b>       |
|               |                      | <b>1</b>      | <b>0.248</b>   | <b>0.332</b> | <b>0.145</b> | <b>Fiscal Policy</b>        |
|               | <b>1</b>             | <b>0.077</b>  | <b>0.029</b>   | <b>0.046</b> | <b>0.09</b>  | <b>Economy productivity</b> |
| <b>1</b>      | <b>0.128</b>         | <b>0.011</b>  | <b>0.421</b>   | <b>0.166</b> | <b>0.16</b>  | <b>Fiscal growth</b>        |

• link in the 5% level of significance of both parties.

The relationship matrix in Table 2 shows some important correlation relationships between the independent variables and the dependent variable in the study. We find, for example, the rate of Fiscal growth is positively associated with the size of the available liquidity in the economy, but it affects a few percents on the growth rate. And this Fiscal growth is linked with the same relationship with the ratio of credit provided to the Private Sector (Private Credit), by a low ratio, which emphasizes the role of credit in stimulating private sector investment, which in turn serves to promote economic growth for the sector, but less than what is expected.

It is also noted that the productivity of the economy are linked positively with all Fiscal growth indicators used in the study, although the percentages are weak and not significantly important in influencing overall economic growth in Jordan, and the weakest was the relationship between economic growth with the size of Fiscal market capitalization, and this relationship means that the state of the Fiscal market is not a catalyst for the growth of economic productivity.

The relationship between the overall Fiscal growth indicators in general (Fiscal growth) with the rate of economic growth seems to be positive, where it was found that the correlation between the two was up to 12.8%. The contribution of the fiscal policy in the economic growth rate was 7.7%.

### Testing the hypotheses

HO1: There is no statistically significant relationship between the percentage of available liquidity in the banking sector and Fiscal growth rates in Jordan.

This Formula is expressed for this hypothesis as follows:

$$\Delta \ln Y = A + \alpha_1 t + \alpha_2 \Delta \ln L$$

$$\Delta \ln Y = 81.65 + 0.88 t + 0.446 \Delta \ln C$$

$$(13.43) (2.55) (9.45)$$

**Table 3: Summary form for the first hypothesis**

| Sig.  | Calculated F | Adjusted R <sup>2</sup> | R <sup>2</sup> | r     | Model |
|-------|--------------|-------------------------|----------------|-------|-------|
| 0.003 | 9.45         | 0.332                   | 0.371          | 0.837 | 1     |

The results in Table 3 indicate to the results of the simple regression analysis between the rate of Fiscal growth and liquidity available in the market, and the value of modulus of elasticity 0.446 for the overall effect of changing the Fiscal growth during the period from 1982 to 2010, which means that there is a positive relationship between the growth rate of the volume of liquidity in the Fiscal sector, which caused increased growth rate expressed as a Fiscal variable M, it also contributed in increasing the rate of economic growth. This means that the Fiscal growth contributed to the increase in the rate of economic growth during the study period by 9.1%, and according to the calculated value of the t-test, which explains about 33.2% of the variance in the dependent variable.

The previous model parameters were estimated using the ordinary minimum squares method OLS with a Moral Significance Level of 5%, and the value of the correlation coefficient between the size of liquidity as an independent variable, and the dependent positive variable was 83%, as the standard deviation to liquidity ratio reached up to 0.998.

Taking the inversion of the previous version, so that Fiscal growth is the dependent variable, and the size of the available liquidity in the economy is the independent variable, also found that all variables are statistically significant, and therefore the Fiscal growth in the economy; contributes to increase the size of the available liquidity by 12.5%, and this emphasizes on a positive two-way relationship between the size of the available liquidity in the economy and Fiscal growth.

$$\Delta \ln C = A + \alpha_1 t + \alpha_2 \Delta \ln Y$$

$$\Delta \ln Y = 18.7 + \alpha_1 0.02 + 0.125 \Delta \ln L$$

$$(9.45) (1.45) (2.97)$$

Based on the value of significance to the calculated test F (0.003), and comparing it with the spreadsheet value (0.05), the hypothesis of the first nihilist relationship is rejected, which sees that there is no relationship between the percentage of available liquidity in the banking sector and the Fiscal growth rate in Jordan, and an alternative hypothesis is accepted, which sees the existence of such a relationship.

HO2: There is no statistically significant relationship between the rates of credit extended to the private sector and between the rates of Fiscal growth in Jordan.

$$\ln Y = A + \alpha_1 t + \alpha_2 \Delta \ln C$$

$$\Delta \ln Y = 77.6 + 0.065 t + 0.31 \Delta \ln C$$

$$(6.23) (1.55) (4.32)$$

In this hypothesis, variables that are believed to affect the Fiscal growth are used, which is the ratio of credit to the private sector of the total credit granted.

**Table 4: Summary of the form for the second hypothesis**

| Sig.  | Calculated F test | Adjusted R <sup>2</sup> | R <sup>2</sup> | r    | Model |
|-------|-------------------|-------------------------|----------------|------|-------|
| 0.046 | 3.22              | 0.09                    | 0.11           | 0.33 | 1     |

The results in Table 4 indicate to the results of the simple regression analysis between the rate of Fiscal growth and the percentage of credit available to the private sector of the total credit extended during the study period, and the value of the effect coefficient of the dependent variable on the Fiscal growth during the period 1982 to 2010 is equivalent to 31%, which means that There is a positive relationship between the rate of credit extended to the private sector and between the Fiscal growth rate according to the calculated value of the t-test.

The previous model parameters were estimated using the ordinary minimum squares method OLS with a Moral Significance Level of 5%, and the value of the correlation coefficient between the two variables was 33%.

Taking the inverted previous version, so that Fiscal growth is the dependent variable, and the ratio of credit extended to the private sector of the total credit extended during the study period, found the positive contribution of the Fiscal growth within the economy in increasing the proportion of credit extended to the private sector as a whole at 0.06%, and this emphasis on a positive two-way relationship between the rate of Fiscal growth and the percentage of credit in the economy, which emphasizes the role of credit in stimulating private sector investment, which in turn serves to promote Fiscal growth in the economy.

Despite the positive previous relationship and with two-way orientation between both variables, The impact percentage is relatively low, and the researcher attributed this result to the credit researcher in a limited number of institutions, which means that the concentration credit phenomenon is unhealthy being considered crippling economic growth in the market, and reduces the sector's contribution in total value added, and the researcher believes that the relatively small sizes of Jordanian banks is a reason enough to encourage integration among themselves to get rid of this phenomenon.

Based on the calculated value of significance to test F (0.046), and compared with the spreadsheet value (0.05), the second nihilism hypothesis is rejected, which sees that there is no relationship between the proportion of credit extended to the private sector as a whole and between the rate of Fiscal growth in Jordan, and an alternative hypothesis is accepted, which sees the existence of such a relationship.

**H03: There is no statistically significant relationship between stock market capitalization and the rate of economic growth in Jordan.**

$$\Delta \text{Ln } Y = A + \hat{\alpha}_1 t + \hat{\alpha}_2 \Delta \text{Ln } C$$

$$\Delta \text{Ln } Y = -25.6 + 0.015 t + 0.17 \Delta \text{Ln } C$$

$$(-1.43) (2.55) (2.99)$$

In this hypothesis, variables that are believed to affect the Fiscal growth are used, stock market capitalization, ie the market value of listed stocks in the market.

**Table 5: Summary form for the third hypothesis**

| Sig.  | Calculated F test | Adjusted R <sup>2</sup> | R <sup>2</sup> | r    | Model |
|-------|-------------------|-------------------------|----------------|------|-------|
| 0.023 | 4.01              | 0.254                   | 0.28           | 0.57 | 1     |

The results in Table 5 indicated to the results of the simple regression analysis between the rate of Fiscal growth and market value of the stock prices raised in the Fiscal market, and the value of the effect coefficient of the dependent variable on the Fiscal growth during the period 1982 to 2010 is equivalent to 17%, which means that there is a positive relationship between capitalization value stocks in the Fiscal market and Fiscal growth rates, according to the calculated value of the t-test.

The previous model parameters have been estimated using the ordinary least squares method OLS with a Moral Significance Level of 5%, and the value of the correlation coefficient between two variables is 57%, it was found that the value of the dependent variable explained about 25.4% of the variation in Fiscal growth.

Taking the inverted previous version, so that Fiscal growth is the dependent variable, and Fiscal market capitalization during the study period, found the positive contribution of the Fiscal growth within the economy to increase the value of shares listed on the stock market at 0.19%, and this emphasis on the positive relationship between the rate of Fiscal growth and Fiscal market capitalization.

Based on the calculated value of significance to test F (0.023), and compared with the spreadsheet value (0.05), the of the nihilism hypothesis is rejected, which sees that there is no relationship between the value of Fiscal market capitalization and between the rate of Fiscal growth in Jordan, and an alternative hypothesis is accepted, which sees the existence of such a relationship.

**HO4: There is no statistically significant relationship between government fiscal policy and the rate of economic growth in Jordan.**

$$\Delta \text{Ln } Y = A + \hat{\alpha}_1 t + \hat{\alpha}_2 \Delta \text{Ln } F$$

$$\Delta \text{Ln } Y = 44.1 + 0.67 t + 0.08 \Delta \text{Ln } C$$

$$(0.43) (1.55) (1.65)$$

In this hypothesis, variables that are believed to affect the Fiscal growth are used, government fiscal policy.

**Table 6: Summary form to the fourth hypothesis**

| Sig.  | Calculated F test | Adjusted R <sup>2</sup> | R <sup>2</sup> | r     | Model |
|-------|-------------------|-------------------------|----------------|-------|-------|
| 0.623 | 1.01              | 0.034                   | 0.037          | 0.067 | 1     |

The results in Table 6 indicate to the results of the simple regression analysis between the rate of Fiscal growth and the governmental fiscal policy, where it was found that the effect value of the coefficient of the dependent variable on the Fiscal growth during the period from 1982 to 2010 is significant from a statistical point, which means that that there is no relationship between the governmental fiscal policy and the and Fiscal growth rate, according to the calculated value of the t-test.

Taking the inverted previous version, so that Fiscal growth is the dependent variable, and the governmental fiscal policy during the study period, a positive relationship of Fiscal growth towards the governmental fiscal policy appeared, where it found that Fiscal growth rate of 1% increases the growth rate of fiscal policy by 7.5 %, due to increased governmental revenues from taxes and customs on corporate profits and Fiscal institutions.

Based on the calculated value of significance to test F (0.023), and compared with the spreadsheet value (0.05), the nihilism hypothesis is rejected, which sees that there is no relationship between the value of Fiscal market capitalization and between the rate of Fiscal growth in Jordan, and an alternative hypothesis is accepted, which sees the existence of such a relationship.

**Gradient analysis:**

To identify the variables that will affect the growth rate of the Jordanian banking sector, a set of independent variables were added, which are believed in its contribution to reduce the variation in the rate of Fiscal growth:

$$\Delta \text{Ln } Y = A + \alpha_1 t + \alpha_2 \Delta \text{Ln } L + \alpha_3 \Delta \text{Ln } C + \alpha_4 \Delta \text{Ln } Z + \alpha_5 \Delta \text{Ln } F$$

Ordinary least squares method OLS was used to estimate parameters of the previous model, and the following table No. 7 shows the results of the analysis that most of the independent variables have statistically failed to influence the dependent variable of fiscal growth.

It was found that the credit rate variable provided for the private sector as a whole is the only affecting element on Fiscal growth in Jordan, where it alone, was able to explain about 91.6% of the variance in the dependent variable. Nevertheless of the direction of this relationship, all other variables were not significant in effect and can not be considered influential on the Fiscal growth in Jordan.

The result shows that the economic sectors, which rely on banks for funding and the domestic Fiscal market, grow faster and bigger; due to their ability to finance their investment activities, and this result is enhanced more in the case of a developed Fiscal system capable to satisfy its needs. The Fiscal growth helps in promoting economic growth, the higher the credit available in the market, and the more plentiful and more able to meet the financing needs of the institutions and the various economic sectors, the greater the rate of economic growth in the final outcome.

**Table 8: transactions form**

| Statistical indicators   | Sig.  | t     | R2    | Standard error | coefficient | Variables                                      | Form |
|--|-------|-------|-------|----------------|-------------|--|------|
| F= 3.464<br>Sig. = 0.038<br>R= 0.883<br>R <sup>2</sup> = 0.815 | 0.036 | 4.066 | 0.916 | 1.06           | 45.9        | Rate of credit provided for the private sector | 1`   |
|  | 0.274 | 1.56  | 0.88  | 1.009          | 1.7         | Fiscal market capitalization                   | 2    |
|  | 0.004 | 1.278 | 0.67  | 0.068          | 1.08        | Liquidity size                                 | 3    |
|  | 0.314 | 0.98  | 0.615 | 0.105          | -0.284      | Fiscal policy                                  | 4    |

**Results**

- Found that the impact rate of the liquidity available in the Fiscal market to grow significantly from a statistical point of which amounted to about 0.446, due to the presence of a positive relationship between the two variables.
- Explains Fiscal growth approximately 33.2% of the variation in economic growth in Jordan.
- Found that the positive causal relationship between the size of the available liquidity in the economy and the Fiscal growth rate is in two directions.
- Found that there is a significant positive and strong relationship between the rate of Fiscal growth and the percentage of credit available to the private sector as a whole and the value of the influence coefficient was about 31%.
- Emphasis on the positive two-way causal relationship between the rate of Fiscal growth and the proportion of credit in the economy to the private sector.
- Found that the impact of the credit granted relatively little Fiscal growth due to the concentration of credit in a



limited number of borrowing institutions.

- Found that there is a positive statistical relationship between the rate of Fiscal growth and the market value of listed stocks in the Fiscal market, amounted to influence the dependent variable coefficient on the Fiscal growth by around 17%.
- Found that there is a positive two-way causal relationship between the rate of Fiscal growth and Fiscal market capitalization.
- There is no statistically significant relationship between the rate of Fiscal growth and governmental fiscal policy.
- Found that there is a positive statistical relationship of Fiscal growth toward governmental Fiscal policy, due to an increase in governmental revenues from taxes and customs duties on corporate profits and Fiscal institutions.
- Using stepwise analysis for all the four independent variables in this study (the volume of liquidity, rate the credit granted to the private sector, Fiscal market capitalization, fiscal governmental policy organizations), it was found that the variable of credit rate granted to the private sector as a whole is the only element affecting the Fiscal growth in Jordan, where it alone could explain about 91.6% of the variance in the dependent variable.

### Recommendations

The study recommends a set of proposals that are believed important in influencing the rate of Fiscal growth in Jordan which are as follows:

- Encourage integration between small Jordanian banks and insurance companies, brokerage, and provide more exemptions, tax and Fiscal incentives that support this trend.
- Providing more Fiscal and investment incentives that encourage foreign banks to enter the domestic market for the development of the Fiscal capital market and benefit it from the technology developed in the sector.
- Reconsider the legislation relating to intellectual property rights and standards of Fiscal disclosure by commercial banks and Fiscal institutions.
- Activating the literary censorship authority exercised by the Central Bank on the performance of the Fiscal market.
- Try to link orientations of the government's Fiscal policy trends in domestic economic growth, and coordinate and organize the relationship more clearly with the requirements of the monetary policy.

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