



Islamic Azad University  
Science and Research  
Branch  
Faculty of Management and  
Economics

**International Journal of Finance,  
Accounting and Economics Studies**  
Journal homepage: <https://ijfaes.srbiau.ac.ir>



## Measuring and Explaining the Relationship Between Financial Development, Innovation and Economic Growth

Omid Farhad Touski \*

*Assistant Professor Department of Accounting, Khorramabad Branch, Islamic Azad University,  
Khorramabad, Iran. [farhadi\\_omid58@yahoo.com](mailto:farhadi_omid58@yahoo.com)*

### Article History

**Submission Date:** 06 February 2022

**Revised Date:** 4 March 2022

**Accepted Date:** 07 May 2022

**Available Online:** October 2022

### JEL Classification:

### Keyword:

Financial Development  
Innovation  
Economic Growth

### Abstract

The purpose of this research is to examine the relationship between financial development and innovation and economic growth. In order to investigate research hypotheses, linear regression was used for manufacturing companies listed in Tehran Stock Exchange between 2013 and 2017. In this research, financial development (financial depth, financial stability and financial efficiency) is considered as an independent variable and innovation and economic growth as a dependent variable. Based on the systematic elimination method, 107 companies were selected as the statistical sample of this research. The research results show that there is a positive and significant relationship between financial depth, financial stability and financial efficiency and innovation of manufacturing companies listed in Tehran Stock Exchange. Also, there is a positive and significant relationship between financial depth, financial stability and financial efficiency and economic growth. As financial development plays an important role in economic growth, it can be said that one of the causes of low economic growth in countries with abundant resources is due to their low level of financial development. Therefore, financial development can lead to economic growth if it can provide the right context for the optimal allocation of resources and increase capital efficiency.

\* Corresponding author: [farhadi\\_omid58@yahoo.com](mailto:farhadi_omid58@yahoo.com)

## 1. Introduction

This research measures and explains financial development, innovation and economic growth in manufacturing companies listed in Tehran Stock Exchange. In the Dictionary of Monetary and Banking Concepts, financial development is considered synonymous with the deepening of financial assets, and it is said that the speed of increasing financial assets is higher than the speed of increasing non-financial assets. In this case, the ratio of financial assets to non-financial assets increases. Financial development is measured by the concept of development of financial markets, including money market and capital market with different dimensions. Financial development is a comprehensive concept that is defined below in six different dimensions: development of the banking sector, development of the non-banking financial sector, development of the monetary sector and monetary policy, banking regulations and supervision, openness of the financial sector, and the institutional environment.

Based on the existing theoretical and empirical views, an efficient financial market is a market where there is no information asymmetry and the transparency of information is properly observed and suppliers and demanders of financial services trade their desired services in a transparent environment with full authority. Effective financial systems play a fundamental role in improving the role of financial intermediation by reducing the costs of monitoring, transactions and information. Effective financial systems expand investment opportunities by identifying and financing suitable business opportunities, equipping savings, covering and diversifying risk, as well as facilitating the exchange of goods and services. On the other hand, increasing the efficiency of the financial system ultimately provides the means for higher economic growth by improving the allocation of resources,

promoting investment and accelerating capital accumulation (Creane, Mobarak, Goyal, & Sab, 2004). Of course, in relation to the development of financial intermediaries and economic growth, different views have been proposed. For example, Robinson (1952) believes that economic growth affects financial development and financial development is a consequence of economic growth. In other words, with the increase in economic growth, the supply of intermediaries and financial services also increases. On the other hand, for example, Goldsmith (1969), McKinnon (1973) and Shaw (1973) believe that financial development through financial markets has an important effect on economic growth and the difference in the quantity and quality of services provided by financial institutions. It can explain an important part of the difference in growth rates between countries. The empirical evidence of recent years has mainly been in the direction of confirming this view. According to this view, financial development affects economic growth through two channels. First, it encourages investment and directly affects the growth rate through capital accumulation. Second, financial intermediation can improve the allocation of resources when the level of investment is fixed. In the new economic growth theories proposed by Romer (1986) and Lucas (1988), they tried to explain knowledge and new technologies as endogenous growth factors. In their view, financial organizations are key players in the fields of industrial activities, and in fact, within the framework of the growth patterns proposed in this era (endogenous growth patterns), the factors that affect the costs and benefits of private investment and investment productivity can continuously increase economic growth. To impress Schumpeter (1912) stated in his "Theory of Economic Development" that economic development is created by innovation in

financial intermediaries, and banks play a prominent role in promoting innovation.

The main purpose of this research is to measure and explain financial development, innovation and economic growth. The independent variable of financial development has been measured by the criteria of financial depth, financial efficiency and financial stability, and innovation and economic growth have been used to measure the dependent variable. The relationship between financial development and economic growth is one of the most important and controversial topics in economics. The motivation of the authors for writing this article is to use different criteria to calculate financial development and also most of the researches on the relationship between financial development and economic growth have been done in developed countries (not in developing countries). The results of previous researches are also contradictory, because each of them used different criteria to measure financial development. In some studies, the interest rate and in some other different definitions of money, it has been introduced as a measure of financial development. Also, in different countries, there are different rules for reporting information. Therefore, research on financial development that can lead to a better understanding of the concept of the development of financial intermediaries and, as a result, economic growth, seems necessary. Therefore, the main question of this research is that financial development has an effect on innovation in companies admitted to the Tehran Stock Exchange. The results of this research can expand the theoretical foundations of the literature related to financial development and innovation, as well as specify the type of relationship between financial development and innovation and economic growth in companies listed in the Tehran Stock Exchange, and its scientific achievement

can be Provide useful information to company managers and stock exchange organizations and macroeconomic policymakers. The research results can also suggest new ideas for conducting new research on financial development and innovation.

The paper is organized as follows. Section 2 Literature review and hypotheses development. Section 3 Research methodology. Section 4 Empirical results. Section 5 discussion and conclusion.

## **2. Literature review and hypotheses development**

This section is dedicated to Theoretical framework and summarizing the studies conducted on the relationship between financial development and innovation and economic growth.

### **2-1. relationship between financial development and economic growth**

The relationship between financial development and economic growth is one of the topics that has received much attention from economists in recent decades. However, there are conflicting opinions about the role that the financial system plays in economic growth. For example, while Levine (1997) believes that financial intermediaries increase economic efficiency through the optimal allocation of capital resources and thus increase economic growth, but Lucas (1988) believes that the role of the financial sector in economic growth is more than The limit is under pressure. Despite the controversy, the modern theoretical literature on the relationship between financial development and economic growth combines endogenous growth theory and microeconomic financial systems (Romer, 1986; Lucas, 1988; Rebelo, 1991; Grossman & Helpman, 1991; Pagano, 1993; and Khan, 2001).

However, in the contemporary period, there is a growing body of empirical

research and theory that shows how financial intermediation can save savings, allocate resources, diversify risk, and contribute to economic growth (Greenwood & Jovanovic, 1990; and Jbili, Enders, & Treichel, 1997). New growth theory argues that financial intermediaries and markets emerge endogenously in response to market imperfections and hence contribute to long-run growth.

A large number of researchers believe that there is a relationship between financial development and economic growth, however, they disagree about the direction of the relationship (causation). On the one hand, some authors have shown theoretically and empirically that the causal direction is towards economic growth from financial intermediaries. That is, the policies that lead to the development of financial systems lead to economic growth. McKinnon (1973), King & Levine (1993), Levine, Loayza, & Beck, (2000), and Christopoulos & Tsionas (2004) support this argument. On the other hand, other authors argue that the direction of the relationship is from economic growth to financial development. As the economy is growing, there is an increasing demand for financial services, which leads to development in the financial sector. Gurley & Shaw (1967), Goldsmith (1969), and Jung (1986) support this argument. Another group of authors argue that the direction of causality is bidirectional. Financial development and economic growth reinforce each other. Financial development supports economic growth and economic growth supports financial development. Based on the growth stage hypothesis, Patrick (1966) states that in the early stages of economic development, the financial sector causes economic growth by expanding and providing capital, and in the later stages when the economy is growing, the demand for financial services increases and leads to It goes to financial development. King and Levine (1993)

believe that savings for investment through financial institutions can increase economic growth. In other words, through technological changes and capital accumulation, financial systems are achieved in economic growth. Capital accumulation is affected by the financial system due to changes in the savings rate or the reallocation of savings. Zomorodian, Hanifi, & Mahboobi (2017) investigated the impact of the development of financial markets (money and capital) on foreign direct investment in Iran's economy. The results indicate that, first, there is a long-term equilibrium relationship between the growth of financial markets and foreign direct investment. Secondly, in the short term, the development of financial markets has a positive effect on foreign direct investment. In the long term, this effect is confirmed for monetary markets, but it is not confirmed for the capital market. Thirdly, the real exchange rate, the development of money and capital markets have a positive effect, and the capital stock, tariff rate and nominal wage index have a negative effect on foreign investment. According to the study of Ebrahimi, Vaez Barzani, Dalali Esfahani, & Fakhari (2015), the qualitative development of the financial system will reduce the level of capital per capita. In addition, the optimal level of the ratio of legal deposits in Iran's banking system can also be inferred. In a general summary, it can be said that in traditional growth models, where the emphasis is on capital accumulation through investment, the expansion of financial markets can play a critical role in equipping resources and savings and facilitating investments. have economic growth and development. In the new growth models, where technology changes and technical progress are endogenously included in the model, the effect of financial markets is wider. In these models, economic growth and development depends on the speed of technical progress,

and also the speed of technical progress depends on the extent of financial markets.

## 2-2. Hypotheses

As discussed in the previous section, there is a possibility of the impact of financial development on innovation and economic growth. Therefore, the research hypotheses are presented as follows:

**H1:** There is a significant relationship between financial depth and innovation.

**H2:** There is a significant relationship between financial efficiency and innovation.

**H3:** There is a significant relationship between financial stability and innovation.

**H4:** There is a significant relationship between financial depth and economic growth.

**H5:** There is a significant relationship between financial efficiency and economic growth.

**H6:** There is a significant relationship between financial stability and economic growth.

## 3. Research methodology

### 3-1. Sample description

In this research, the systematic elimination method was used to determine the statistical sample. For this purpose, those companies of the statistical society that have the desired conditions are selected as a statistical sample and the rest are excluded. The financial year of the company ends at the end of March every year and the company has not changed the financial year during the period under review. The companies under investigation should not be part of investment, holding, financial intermediation, bank and insurance companies. Their information and data should be available. The company's shares have been continuously traded in the Tehran Stock Exchange and there has been no suspension of trading for more than three months. According to the above conditions and limitations, a total of 107 companies

have been selected as the statistical sample of the research among the companies accepted in the Tehran Stock Exchange. Data related to stock prices have been collected from Tehran Stock Exchange website. The required accounting data was collected manually from the annual reports of the companies.

### 3-2. Measurement of variables

Dependent variable - economic growth (GDP): In order to calculate economic growth, GDP growth has been used.

Dependent variable - innovation (INV): calculated through the ratio of research and development expenses to the total assets of the company.

Independent variable - financial development (FIN\_DEV): In order to measure financial development in this research, three indicators of financial depth, financial efficiency and financial stability have been used as follows:

Financial Depth Variable (DEPT): Ratio of current stock market value to current GDP.

Financial efficiency variable (EFFI): the ratio of operating expenses to operating income.

Financial stability variable (STABILITY): The difference between the current year's stock price and the previous year's stock price divided by the previous year's stock price (stock price volatility).

Control variable: Based on previous studies, the following control variables have been used to control the effect of some variables on the relationship between independent and dependent variables.

Development of the banking sector (DEV): the ratio of outstanding debt to banks to GDP.

Openness of the financial sector (OPEN): ratio of liquidity to GDP.

### 3-3. Empirical models

In order to investigate the relationship between financial development and

innovation and economic growth, the following multivariate regression model has been used.

$$INV_{it} = \beta_0 + \beta_1 DEPT_{it} + \beta_2 EFFI_{it} + \beta_3 STABILITY_{it} + \sum_{j=1}^3 \beta_j controls_{it} + \varepsilon_{it} \quad (1)$$

$$GDP_{it} = \beta_0 + \beta_1 DEPT_{it} + \beta_2 EFFI_{it} + \beta_3 STABILITY_{it} + \sum_{j=1}^3 \beta_j controls_{it} + \varepsilon_{it} \quad (2)$$

In the regression model (1), the dependent variable of innovation (INV) is measured by the ratio of research and development expenses to the total assets of the company. In the regression model (2), the dependent variable of economic growth (GDP) is measured by the growth of the gross domestic product. In both regression models, the independent variable is financial depth (DEPT) through the ratio of the current value of the stock market to GDP, financial efficiency (EFFI) through the ratio of operating expenses to operating income, and financial stability (STABILITY) through the price differential. Shares in the current year are measured by the share price of the previous year divided by the share price of the previous year. The variables of banking sector development (DEV) and financial sector openness (OPEN) are control variables of regression model (1) and (2). In all the regression models of the mentioned article, virtual variables for year and industry are used to control the fixed effects of year and industry. How to measure all variables is in the above sections.

## 4. Empirical results

### 4-1. Descriptive statistics

The descriptive analysis of this paper begins with a statistical summary of the

variables used in the empirical regression model. Table (1) shows some concepts of descriptive statistics of variables, including mean, median, maximum observations, minimum observations and standard deviation. The results show that in the surveyed companies, the average innovation is 0.121, which means that on average 12% of the total assets of the companies are research and development expenses. The average economic growth is 0.330 and it shows that on average 33% of GDP growth is created by companies. The average financial depth of companies is 0.512. The average financial efficiency of companies is 0.487 and the average financial stability of companies is 0.134.

Then univariate analysis of the variables used in the empirical regression model has been done. By performing the correlation test, the basic relationship between the variables is examined (univariate analysis) and according to the results of Table (2), it can be said that there is a relationship between the variables and these relationships can be investigated more closely.

To neutralize the effects of outliers in the regression model (OLS), all continuous variables are adjusted between 1% and 99%. Pearson's correlation has been used to identify the collinearity between the explanatory variables of the research. The results of Table (2) show the correlation coefficient between all the variables of the regression model and the coefficient obtained for all the independent and control variables is less than 0.7. Also, the results obtained from the VIF calculation (not presented in this article) show (less than 10) that there is no collinearity between the variables.

Table 1: Descriptive statistics

	variables	mean	median	Maximum	Minimum	Std. dev.
(1)	INV	0.121	0.126	0.539	-0.259	0.162
(2)	GDP	0.330	0.311	0.666	0.131	0.042
(3)	DEPT	0.512	0.508	0.859	0.152	0.201

(4)	<i>EFFI</i>	0.487	0.429	0.735	0.162	0.210
(5)	<i>STABILITY</i>	0.134	0.120	0.327	0.081	0.045
(6)	<i>DEV</i>	0.420	0.368	0.793	0.136	0.164
(7)	<i>OPEN</i>	0.481	0.454	0.765	0.114	0.217

Note: Table 1 shows the descriptive statistics of 107 companies registered in Tehran Stock Exchange from 2013 to 2017. INV represents innovation measured by R&D expenditures to the firm's total assets. GDP represents economic growth measured by the growth of gross domestic product. DEPT represents the company's financial depth, which is measured by the ratio of current stock market value to GDP. EFFI represents the financial efficiency of the company, which is measured by the ratio of operating expenses to the operating income of the company. STABILITY indicates the company's financial stability, which is measured by the fluctuations of the company's stock price and through the difference between the current year's stock price and the previous year's stock price divided by the company's stock price in the previous year. DEV indicates the development of the banking sector as measured by the ratio of outstanding debt to banks to GDP. OPEN represents the openness of the financial sector as measured by the ratio of liquidity to GDP. Also, control variables at the level of year and industry have also been considered.

**Table 2: correlation matrix**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1)		0.061	0.020	0.074*	0.043	0.101**	0.110**
(2)	0.033		-0.010**	-0.027	-0.078*	0.010	0.139***
(3)	0.011	-0.004		0.267***	0.402***	0.085*	0.174***
(4)	-0.020	-0.009	-0.007		0.164***	0.082*	0.331***
(5)	0.017	0.013	0.012	-0.950***		0.021	0.060
(6)	0.145***	0.063	-0.028	-0.056	0.059		0.308***
(7)	0.076*	0.046	0.071	-0.005	0.007	0.244***	

Note: Table 2 shows the Pearson-Spearman correlation matrix (lower and upper part of the table) of the variables between 2013 and 2017. \*, \*\*, \*\*\* indicate significance at the level of 10%, 5%, 1%.

#### 4-2. Multivariate analysis

In order to test the hypothesis, the estimation results of the model presented in Table (3) have been used with the combined data approach. The significance of Chow's statistic at the 5% level shows that in estimating the models, the fixed effects model has priority over the pooled data model. Also, the significance of Hausman's statistic at the 5% level shows that for the estimation of models, the fixed effects model is superior to using the random effects model (not presented in this article). Therefore, the models were estimated using the fixed effects model and the results are presented in Table 3.

Column (1) of Table (3) shows the relationship between financial development and innovation. In the mentioned model, INV represents innovation and dependent variable. The results show that the coefficient of financial depth and financial efficiency are significant at the level of 5% and financial stability at the level of 1%. Financial depth, financial efficiency, and financial sustainability have a positive relationship with innovation. According to these results, the first to third hypotheses of the relationship between financial depth, financial efficiency, and financial sustainability of the company and innovation are confirmed.

**Table 3: Multivariate results for the relationship between financial development, innovation and economic growth**

Independent Variable	Dependent variable	
	INV	GDP
<i>Intercept</i>	0.242(1.003)	0.270**(1.138)

<i>DEPT</i>	0.705**(4.351)	0.686**(5.670)
<i>EFFI</i>	0.507**(5.226)	0.373***(7.833)
<i>STABILITY</i>	0.673***(6.350)	0.503**(5.240)
<i>DEV</i>	0.657**(4.351)	0.641**(3.684)
<i>OPEN</i>	0.703**(6.561)	0.205***(7.530)
<i>Industry fixed effects</i>	YES	YES
<i>Year fixed effects</i>	YES	YES
<i>Adjusted R Square</i>	0.71	0.52

Note: t-statistics reported in parentheses are based on standard errors clustered by company and year. \*,\*\*,\*\*\* indicate significance at 10%, 5%, 1% level. All regressions include industry and year fixed effects. All continuous variables are adjusted at the top and bottom of one percent. We have used Fisher's test to accept or reject the use of panel data. The results of this test, not reported here, indicate the presence of an individual effect and support the use of panel data model regression. Hausman test was used to determine the fixed effect or random effect. We have also added year-level and industry-level control variables in our study.

Column (2) of Table (3) shows the relationship between financial development and economic growth. In the mentioned model, GDP represents economic growth and is a dependent variable. The results show that the coefficient of financial depth and financial stability are significant at the level of 5% and financial efficiency at the level of 1%. Financial depth, financial efficiency, and financial sustainability have a positive relationship with economic growth. According to these results, the third to sixth hypotheses of the relationship between financial depth, financial efficiency, and financial stability of the company and economic growth are confirmed.

## 5. Discussion and conclusion

The purpose of this research is to investigate the relationship between financial development and innovation and economic growth of companies listed in the Tehran Stock Exchange. The relationship between financial development and economic growth is one of the topics that has received much attention from economists in recent decades. However, there are conflicting opinions about the role that the financial system plays in economic growth. For example, while some authors believe that financial intermediaries increase economic efficiency through the optimal allocation of capital resources and,

as a result, increase economic growth, some other authors believe that the role of the financial sector in economic growth is under too much pressure. has taken. Despite the controversies that exist in the literature of modern theories regarding the relationship between financial development and economic growth, the theory of endogenous growth and microeconomic financial systems combine together.

Financial development (financial depth, financial stability and financial efficiency) is considered as an independent variable and innovation and economic growth as a dependent variable in this research. The statistical sample of this research includes 535 companies - observation years between 1393 and 1397 from the listed companies of Tehran Stock Exchange. The results of the hypothesis test (research evidence) show that there is a positive and significant relationship between financial development and innovation, as well as between financial development and economic growth. The results of this research are in accordance with the findings of McKinnon (1973) and Levine (1997).

The results of two models show a positive relationship between financial development and innovation and economic growth in Iran. The optimal allocation of income to investment plans through the stock and securities market has increased the efficiency of investment and consequently



the efficiency of financial instruments and the appropriate and positive impact of financial development on innovation and economic growth. In general, it can be said that financial development is not achieved only by development in banking, financial and monetary dimensions, and more attention should be paid to innovations outside the banking system. And the role of stock and securities markets in creating economic growth will become more prominent. As financial development plays an important role in economic growth, it can be said that one of the causes of low economic growth in countries with abundance of resources is due to their low level of financial development. Therefore, financial development can lead to economic growth if it can provide the right context for the optimal allocation of resources and increase capital efficiency.

It should be noted that there are differences in the size of the research sample, differences in the structure of the studied companies, the use of different indices and criteria for measuring variables, differences in the standards and rules of information preparation of the two countries, and differences in the economic and political conditions of the two countries. It can be one of the reasons for the contradiction between the results of the present study and the results of other researchers. Therefore, the generalization of the theories supporting the obtained results to the Iranian environment (emerging markets) should be done with more consideration because the obtained results may be caused by factors that are specific to Iranian markets. For this reason, the necessary culture building should be done among investors and other information users regarding their familiarity and greater use of the fundamental and specific information of companies in order to reduce the information asymmetry of stocks. It is suggested to the policy makers to consider and pay more attention to the optimal

allocation of resources and capital efficiency in formulating macroeconomic policies whose goal is financial development in order to increase economic growth, because this issue, information efficiency and As a result, it will increase the allocative efficiency of the capital market. Future researchers are also suggested to use other financial development criteria or combined criteria.

### References

- Christopoulos, D. K., & Tsionas, E. G. (2004). Financial development and economic growth: evidence from panel unit root and cointegration tests. *Journal of development Economics*, 73(1), 55-74 .
- Creane, S., Mobarak, A. M., Goyal, R., & Sab, R. (2004). Financial sector development in the Middle East and North Africa .
- Goldsmith, R. (1969). Financial structure and development(Yale University Press. New Haven, CT) .
- Ebrahimi, B., Vaez Barzani, M., Delali Esfahani, R., & Fakhar, M. (2015). Empirical study of the effect of qualitative development of financial system on economic growth (Case of Iran). *Economic Growth and Development Research*, 6(22), 71-84. (in persian)
- Greenwood, J., & Jovanovic, B. (1990). Financial development, growth, and the distribution of income. *Journal of political economy*, 98(5, Part 1), 1076-1107 .
- Grossman, G. M., & Helpman, E. (1991). Quality ladders in the theory of growth. *The review of economic studies*, 58(1), 43-61 .
- Gurley, J. G., & Shaw, E. S. (1967). Financial structure and economic development. *Economic development and cultural change*, 15(3), 257-268 .
- Jbili, A., Enders, K., & Treichel, V. (1997). Financial sector reforms in Algeria,

- Morocco, and Tunisia: A preliminary assessment .
- Jung, W. S. (1986). Financial development and economic growth: international evidence. *Economic development and cultural change*, 34(2), 333-346 .
- Khan, A. (2001). Financial development and economic growth. *Macroeconomic dynamics*, 5(3), 413 .
- King, R. G., & Levine, R. (1993). Financial intermediation and economic development. *Capital markets and financial intermediation*, 156-189.
- Levine, R. (1997). Financial development and economic growth: views and agenda. *Journal of economic literature*, 35(2), 688-726 .
- Levine, R., Loayza, N., & Beck, T. (2000). Financial intermediation and growth: Causality and causes. *Journal of monetary economics*, 46(1), 31-77 .
- Lucas Jr, R. E. (1988). On the mechanics of economic development. *Journal of monetary economics*, 22(1), 3-42 .
- McKinnon, R. I. (1973). Money and capital in economic development (Brookings Institution, Washington, DC).
- Pagano, M. (1993). Financial markets and growth: an overview. *European economic review*, 37(2-3), 613-622 .
- Patrick, H. T. (1966). Financial development and economic growth in underdeveloped countries. *Economic development and cultural change*, 14(2), 174-189 .
- Rebelo, S. (1991). Long-run policy analysis and long-run growth. *Journal of political economy*, 99(3), 500-521 .
- Robinson, J., 1952. "The Generalization of the General Theory," in the rate of interest, and other essays, Macmillan: London, pp. 67-142.
- Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of political economy*, 94(5), 1002-1037 .
- Schumpeter, J. A. (1912). 1934. *The theory of economic development* .
- Shaw, E. S. (1973). Financial deepening in economic development .
- Zomorodian, H., & Mahboobi, B. (2017). Investigating the impact of foreign direct investment on monetary and financial market development in Iran's economy. *Investment knowledge*, 7(25), 223-244. (in persian)

**HOW TO CITE THIS ARTICLE:**

Farhad Touski O. (2022). *Measuring and explaining the relationship between financial development, innovation and economic growth*, 3(3): 29-38.

**DOI:**

Url: [https://ijfaes.srbiau.ac.ir/article\\_16607.html](https://ijfaes.srbiau.ac.ir/article_16607.html)

Journal homepage: <https://ijfaes.srbiau.ac.ir>