Shahid Chamran University of Ahvaz

Quarterly Journal of Quantitative Economics

Journal Homepage:
www.jqe.scu.ac.ir
Print ISSN: 2008-5850
Online ISSN: 2717-4271



The effect of government spending and adjusting population age structures on financial development in Iran's economy

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ARTICLE HISTORY	JEL CLASSIFICATION	KEYWORDS
Received: 16 March 2024 ***revision: 12 July 2024*** ***acceptance: 31 December 2025***	***G00,J10***	***Capital expenditure, consumption expenditure, age structure, financial development***

Acknowledgments: Acknowledgments may be made to individuals or institutions that have made an important contribution.

Conflict of Interest: The authors declare no conflict of interest.

Funding: The authors received no financial support for the research, authorship, and publication of this article.

How to Cite:
Jafari, Mohammad & Fatholahi, Elham. (2026). The effect of government spending and adjusting population age structures on financial development in Iran's economy. *Quarterly Journal of Quantitative Economics(JQE)*, 23 (1), 201-224.

10.22055/jqe.2025.46415.2614

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EXTENDED ABSTRACT

INTRODUCTION

Public expenditure is an important tool for the government to control the economy. Economists have been well aware of its double effects in promoting economic growth. On the one hand, public investment is a factor that helps capital accumulation. Public spending is also used to fill gaps in public services, health care, social security, etc. that are left untouched in a market economy. Since human capital plays a key role in promoting economic growth, a decrease in the amount of people's profits due to paying more taxes to finance public expenditures is associated with a decrease in the rate of economic growth. Considering the economy as a whole, the question of how to spend public expenditure appropriately has been a difficult task (Vu LE & Suruga, 2005).

Fiscal policy in developing countries is significantly cyclical and has an elasticity of public spending to GDP growth higher than one. Brzozowski and Siwinska-Gorzelak (2013) show that cyclical fiscal policy has a negative effect on economic growth. The cycle in public spending is usually explained by the fact that during times of recession, countries did not have access to financial aid, so the flow of debt contributed to the cyclical decline in public spending. Cyclicalism is desirable in the context of shallow dominance of financial markets, because expansionary fiscal policy leads to an overcrowding of private investments. (Lledo et al, 2009). Based on empirical evidence, it seems that the performance of domestic debt and other financial markets in general is not relevant for the observed cycle, because the coefficients of depth in financial markets and the cost of domestic credit are economically close to zero and underdeveloped domestic financial markets at that time. It limited government financing independently of the business cycle (Lledo et al., 2011). It seems that the level of internal borrowing of the government to finance public expenses destroys the private sector and weakens the growth of the financial sector (Bikefe et al, 2022). Similarly, Naceur et al (2014) found that government spending attracts liquidity from financial markets, thereby reducing the ability of financial intermediation to mobilize the savings needed to finance private sector investments; Therefore, lower levels of financial development are associated with higher government spending and vice versa. Since government spending needs to be financed

through the issuance of government bonds, these bonds play an important role in benchmarking the issuance of private sector bonds and play an important role in advancing the overall growth of the financial sector.

The increase in population increases the level of urbanization and food insecurity, which initially causes corruption and misery. In response, the government is looking for tools to plan, coordinate, order and organize urbanization, create urban infrastructure, provide social services, and expand defense and security alternatives. Such measures always lead to an increase in public costs. Therefore, affirming the positive effect of population growth or size on public expenditure is a preliminary confirmation of the active role of the government in spending means to meet the needs of the society, while the negative effect of population on public expenditure requires active steps by the government to reduce the size and role of the government in Its demographic affairs. A country with a population of 0 to 14 years old or 65 years old, its government should spend more on education, health capital and projects to attract the unemployed dependent population. The young population (0-14) creates the potential for a large future workforce that needs to be absorbed into employment sectors. This will inevitably force the government to create more job opportunities that will create more demands for wages and salaries, providing elderly social services such as health care and monthly or quarterly pension payments for the 65-year-old population. In this way, current and capital expenditures increase simultaneously with population growth over the years (Azolibe et al, 2020).

METHODOLOGY

Given that public spending has both direct and indirect effects on financial development through channels such as imports, investment, and labor, the effects differ across economies depending on whether the spending is financed through taxes or debt. The combined levels of each source of expenditure financing may affect the growth of a different financial sector. Wang (2005) claims that if government spending is supported by borrowing, interest rates in financial markets are likely to rise due to increased competition for scarce funds. As a result, rising interest rates reduce private investment as more people divert funds to savings in bonds and banks, weakening financial sector growth. Given that the relationship between population structure and financial development, which mainly focuses on two aspects, asset prices and asset returns, and changes in the age structure of a country's population change its asset demand and then affect asset prices, and

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since Population aging has increased the uncertainty of capital accumulation in many large economies and may increase the uncertainty in the domestic savings rate and cause a decrease in investment and an increase in the investment rate, which inevitably reduces the stability of the financial sector. Econometric model The general used in this research according to the presented theory of the effect of government spending on financial development through adjusting the age structure of the population, which is adapted from the theoretical model presented by Kapaya (2023), is as follows:

(1) F=f(K, C, Y, M, I, O, G)

As shown in the general figure below, in order to facilitate the interpretation of coefficients, all variables are transformed into logarithmic mode.

(2) $$LFDT_t = \alpha_i + \beta_1 LK_t + \beta_2 LC_t + \beta_3 LY_t + \beta_4 LM_t + \beta_6 LI_t + \beta_7 LO_t + \beta_8 LG_t + \varepsilon_t$$

The main and dependent variable of financial development research is (domestic credits to the private sector as a percentage of GDP) (F). Two independent variables derived from government expenditures are included in the model to express the direct effects of government expenditures on financial development, including: public capital expenditures (formation of government gross capital as a percentage of GDP) (K) and public consumption expenditures (final consumption expenditures government, as a percentage of GDP) (C), as well as selected variables derived from population size to investigate the effect of population age structure on financial development including: young population (0-14 years old population, as a percentage of the total population) (Y) and The adult population (population aged 15–64, as a percentage of the total population) is (M). Inflation (as an annual percentage) (I), trade openness (sum of exports and imports divided by GDP) (O) and GDP per capita (G) are other important variables that have an effect in this relationship and express the effects in a way Government expenditures on financial development are considered indirect. For the purpose of uniform scaling, variables were transformed using logarithms. Various indicators are used to measure the growth of the financial sector. Bank credit measures are often used as an indicator of financial sector growth. Examples include domestic credit to the private sector as a percentage of GDP (financial depth), money deposits and central bank assets as a percentage of

GDP, and cash liabilities as a percentage of GDP or quasi-money (M3). . It is emphasized that banks act as the primary embodiment of financial development in developing countries (kapaya, 2021). As a result, the development of the banking sector is sometimes equated with the financial development of a nation. As a result, bank credits to the private sector are always mentioned in this context as the best indicator for the financial development of a country, and higher values indicate the efficiency and importance of financial institutions in allocating credits to the private sector, and have been used in other researches (Agyapong and Bedjabeng, 2020). It should be noted that all the research data were collected from the World Bank for the years 1990 to 2022 based on the criteria of availability and used using Eviews 10 software.

FINDINGS

Research findings show that financial development is positively related to capital expenditure, consumption expenditure, young population and trade openness, while as expected financial development has a negative relationship with inflation, which confirms the importance of controlling inflation for better economic performance. he does. These results are consistent with the results of Ou edraogo et al. (2020). The results show that overall, the negative impact of trade openness is insignificant compared to its positive impact on financial development, so the promotion of trade openness and individual economic efficiency is well related to the growth of the financial sector and other economic variables. The economic importance of consumption expenditure is one and a half times in the FMOLS method and in the DOLS method, which removes the deviation and skew of the ordinary least squares estimates by increasing the intervals and simultaneous values in the constant regression, and the past and future value of the differential explanatory variables as additional variables in the estimation. It is considered that it is four and a half times more than capital expenditures for financial development in Iran, the values are equal to 0.64 and 9.17, respectively. Financial development in Iran in the long term is more sensitive to consumption expenditures than capital expenditures, which is in line with the results of the study by Fuji et al. (2013). Also, this result is in line with the result of Kaguchi (2019), who believes that fixed government spending combined with good governance increases financial development. The effect of inflation on the growth of the financial sector is negative in both methods

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and is equal to -0.12 and -0.93, respectively, which is consistent with the study of Ou edraogo et al. (2020).

As the results show, the increase of the adult population in Iran has a different effect on government spending depending on its actions towards the actions of the private sector. Governments borrow or tax private agents to spend. Population growth causes increased consumption expenditure, creates more borrowing and tax collection, which may discourage private investments, savings and demand for credit by private agents, thus leading to negative consequences on financial development. Considering the negative relationship between the adult population variable and financial development in Iran, it can be said that the increase of this variable does not increase the tax base and tax collection from the private sector and does not provide the possibility of more government spending. In addition, the increase in the adult population does not sufficiently increase government spending on employment, health services, health insurance, welfare and security, which are consumption expenditures, thus they do not promote the redistribution of income that private investment and savings by sector agents. promote private sector, which in turn does not increase the demand and supply of credit by private agents and does not benefit financial development through consumer spending. But in the case of the young population, this result has a positive effect on financial development.

CONCLUSION

Public expenditure has both direct and indirect effects on financial development. Direct effects can be visualized through the growth model, while indirect effects are transmitted through channels such as imports, investment, and labor. The effects differ between economies depending on whether spending is financed through taxes or debt. The combined levels of each source of expenditure financing may affect growth differently; In this regard, this study seeks to examine the effect of government spending on financial development with attention and focus on the age structure of the population in Iran during the years 1990 to 2022 with the FMOLS and DOLS co-accumulation method. Based on the obtained results, policies that emphasize the separate independent effects of capital expenditures and consumption expenditures on financial development should be considered. Macroeconomic policies such as provision of education, health care and inflation control that affect government spending must consider their effects on private sector access to credit, ability to save and interest rates that affect

financial development. This can be done by controlling harmful effects and promoting beneficial effects possibly through organizational policies. These recommendations are consistent with Ou edraogo et al (2020). that spending in countries with a high risk of conflict and violence is the least likely to accumulate in the private investments that are necessary for the growth of private credit. Therefore, the government should promote policies that ensure public-private partnership by reducing imminent risks. Policies that account for the separate effects of capital and consumption expenditures should be considered, as these two types of expenditures are typically not correlated. Policies that consider the interactions of population against public spending will facilitate greater convergence in fiscal development. The findings support the positive effects of both types of spending on financial development. The effect of consumption expenditure is more obvious, sensitive and economically larger than capital expenditure. Based on the results of this study, two related mechanisms and policy implications are recommended that crowd out private investments. First, ongoing capital expenditures reduce incomes but increase consumption expenditures on savings. In response, people increase their labor force to counter the effect on their incomes, so the persistence of these effects causes a crowding out of private investment and a demand for private credit. Second, persistent consumption and capital expenditures create demand shocks in the private sector, and private firms that produce and maintain public goods respond by increasing private investments. These shocks create a certain demand for private credits, so capital expenditures and consumption expenditures accumulate in private investments. Therefore, policies should strengthen the public-private relationship, the variables that are intertwined in this link, such as interests, savings, financial intermediation and private sector promotion strategies should be examined together and comprehensively.

For fiscal development, policies that cautiously promote youth population growth should also promote capital spending and promote essential consumption spending in the short term, while spending policies that respond to mature population growth, such as employment policies, should promote capital spending. to postpone Finally, due to the fact that public spending and fluctuations in its financing cause high interest rates, the uncertainty of the cost and time of selling assets, and the reduction of credits to private agents, and as a result, it reduces the depth of financial markets, so based on the results, it can be He said, the government should spend more wisely and control spending behavior because its effects on the economy and

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especially the private sector and financial development cannot be overemphasized. Because its effects on inflation and production or individual income can beneficially or severely affect financial development. If employees retire at a young age, more job opportunities will be created for young people to improve labor productivity and ultimately lead to financial development and economic growth. Future researches can use the distribution density index of banking financial institutions to conduct empirical analysis to investigate the causal relationship between the distribution of banking financial institutions and the extent of age structure services. On the other hand, from the perspective of time change, it is possible to examine the dynamic effects of age structure and financial development with time in order to identify the changes in the relationship between these two with time and place in order to enrich and develop the knowledge of the relationship between population and financial affairs.

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