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Investigating the Asymmetric Effect of Public Debt on Private Investment in Iran*

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Abstract

Government debt has always been an issue in academic and policy circles. Increasing government debt can affect private investment, and this effect can vary in different economic conditions. This paper examines the asymmetric effect of public debt on private investment in Iran from 1973-2023. For this, after performing unit root tests, the relevant model was estimated using the Nonlinear Autoregressive Distributed Lag (NARDL) model. We found that there is a significant negative relationship between positive and negative changes in public debt and private investment in Iran in the long run, such that an increase in public debt leads to a decrease in private investment and a decrease in public debt leads to an increase in private investment. The results also showed that in the long run, the effect of domestic credit to the private sector on private investment is negative and significant, but the effect of interest rates on private investment is positive and significant.

Keywords: Domestic Credit to Private Sector, Public Debt, Government, Private Investment, Interest Rate.

JEL Classification: E60, E62, H63, D84.

*. This article is taken from Faeze Gohari 's master thesis at University of Bojnord.

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1. Introduction

Investment is one of the most important components of aggregate demand, which plays a very decisive role in economic fluctuations and economic growth of a country. Private investment is important because it lays the foundation of society's production and increases production capacity, and policymakers guide investment and capital formation by using macroeconomic policies. Meanwhile, public debt is recognized as one of the factors affecting private investment, and how it affects this type of investment has always been the focus of economists and policymakers. Many studies emphasize that increasing public debt can crowd out the net benefits of private investment in several ways: (1) it raises the borrowing cost (i.e., interest rates) of scarce domestic credit (Codogno et al., 2003; Huang et al., 2016); (2) it increases the use of physical and financial resources that could otherwise be saved for private investment (Ang, 2009); (3) it induces expectations of higher taxes in the future (Bom, 2017); and (4) it alters a country's debt portfolio and demand for financial assets (da Silva et al., 2014). In the Iranian economy, the effects of financial instability caused by the government's budget deficit, debt accumulation, and declining oil revenues in recent years have led the government to issue debt securities. Therefore, the issue of government debt and its effects on economic variables, particularly private investment, has become a focus of attention (Nasrin Dost et al., 2021). Given the importance of private investment in economic growth and the role of government debt as one of its influencing factors, a thorough and scientific examination of the relationship between these two variables in the Iranian economy is essential.

2. Theoretical framework

In the theoretical literature, the relationship between private investment and public debt is divided into four perspectives: (1) The classical view argues that government borrowing crowds out private investment by transferring resources (e.g., capital) from the relatively less productive private sector to the public sector. (2) The neoclassical view argues that government borrowing from banks increases its purchasing power, which diverts resources from other sectors, thereby reducing private investment (Lau et al., 2019). (3) The Keynesian view argues that government spending can increase private investment through multiplier effects. According to Keynesians, fiscal stimuli will have a negligible or non-existent effect on the interest rate and will increase aggregate spending in the public and private sectors (Friedman, 1978; Spencer & Yohe, 1970). Keynesian economists also believe that government expenditure can lead to an increase in private investment due to the multiplier effect of fiscal policies. (4) The Ricardian view argues that interest rates and private investment remain unchanged, as people anticipate higher taxes in the future to repay debts, and savings increase (Barro, 1979; Bassanini &

Scarpetta, 2001; Gumus, 2003). Some studies also show that public debt leads to the crowding out of private investment through four channels: (1) The liquidity constraints hypothesis suggests that public borrowing creates a higher interest rate for private investment by reducing available credit (Huang et al. 2016; Ismihan & Ozkan, 2012); (2) Public investment competition reduces physical and financial resources that can be used for private investment (Ang, 2009a); (3) Public investment financed by debt can crowd out private investment through higher future tax rates, which reduces the return on private investment (Bom, 2017), and (4) It is possible that excessive use of public debt may alter a country's debt portfolio and, consequently, the demand for its financial assets (da Silva et al., 2014). Islam & Nguyen (2024) also demonstrated that high levels of government debt lead to a reduction in access to financial resources for private sector firms and consequently reduce their investment.

3. Methodology

Following Lau et al. (2019), an empirical model was employed to investigate the asymmetric effect of public debt on private investment in Iran. The Nonlinear Autoregressive Distributed Lag (NARDL) model was utilized for the period 1973-2023.

4. Discussion

The results of estimating the long-term coefficients of positive and negative changes in public debt on private investment indicate that both coefficients are asymmetric, negative, and significant in the long run. This result is based on theoretical foundations and is consistent with the findings of some domestic studies. In the short term, the estimated coefficient for positive changes in public debt is also negative and significant, but it is not significant with a lag; this means that in the short term, a one-unit increase in public debt reduces private investment by 0.21 units. The results also show that although there is a negative and significant relationship between domestic credit to the private sector and private investment in the long run, but the effect of the interest rate on private investment is positive and significant. However, the effect of the interest rate on private investment is not significant in the short term, but it is negative and significant with a lag. This result shows that with an increase in the interest rate, private investment decreases. Therefore, the traditional negative relationship between the interest rate and investment is confirmed in the short term.

5. Conclusion and Suggestions

The effect of domestic credit to the private sector on private investment is negative and significant in the long run. This finding suggests that the direction of bank

credit is not towards productive activities, and most of these resources have been distributed in early-return and service investments. The positive and significant effect of the interest rate on private investment in the long run indicates that increasing the interest rate leads to increased savings and increased bank funds, and ultimately will increase private investment. Also, regarding the negative and significant effects of both positive and negative changes in public debt on private investment in the long term, it can be said that with an increase in public debt, the necessary resources, instead of moving towards investment channels, will be spent solely on government financing and the allocation of financial resources for facilities to the public sectors. This issue leads to a scarcity of resources available for lending to the private sector, which in turn deteriorates private investment in the country. Also, reducing public debt, by affecting the banking system, will provide the necessary conditions and resources for granting loans and facilities to the private sector, which will lead to improved private investment. Decreasing public debt will also, by influencing the banking system, provide the necessary conditions and resources for granting loans and facilities to the private sector, which will lead to improved private investment. Therefore, reducing public debt and stricter financial discipline can be a better way for the government to stimulate economic growth, with private investment being a key driver.

6. Ethical considerations

6.1. Compliance with ethical guidelines

The present study has followed the scientific principles of research.

6.2. Funding

This paper is derived from the master's thesis of Ms. Faezeh Gohari under the supervision of Dr. Majid Dashtban Farouji and the advice of Dr. Azim Nazari.

6.3. Authors' Contribution

This paper is an extract from a master's thesis.

6.4. Conflict of interest

The authors declare that there is no conflict of interest in this research.

6.5. Acknowledgments

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