The Effect of Domestic and Public Investment on Economic Growth in Somalia

Yasmin Abdullahi Mohamud[1], Aini Azeqa Ma'rof[2], Abdullahi Mohamud Mohamed[4] and Abdullahi Mohamed Ali[1]

[1]Odoros Research Center, Tre-piano, Makkah Al-Mukarramah Road, Mogadishu, Somalia, [2]Institute for Social Science Studies, Universiti Putra Malaysia, Serdang 43400, Malaysia, [3]Faculty of Human Ecology, Universiti Putra Malaysia, Serdang 43400, Malaysia, [4]Faculty Business administration, University of Somalia, Mogadishu Somalia.
Email: azeqa@upm.edu.my

Abstarct
Government expenditures possess the potential to exert either a favorable or detrimental influence on an economy. Augmentations in public investment yield augmented yields, enhancing the output and employment status of any nation and propelling economic expansion. The study conducts an in-depth investigation into the intricate relationship between government spending, public investment, and their impact on economic growth. It offers a nuanced understanding of this complex interplay by drawing on economic theories, empirical studies, and real-world examples. The study employs robust econometric methods, specifically the Ordinary Least Squares (OLS) regression, to investigate the impact of public investment and domestic investment on GDP growth. The results reveal a strong and positive relationship between both public investment and domestic investment with economic growth. Specifically, a one percent increase in domestic investment correlates with a substantial 53.1 percent increase in GDP, emphasizing the significance of private sector investments. Similarly, a one percent increase in public investment results in a notable 23.3 percent GDP increase, highlighting the role of government-led initiatives, particularly infrastructure projects, in promoting economic growth. These findings validate the importance of a balanced approach that leverages both public and private investments for sustainable economic growth. The study underscores the importance of balancing public and private investments for economic growth while emphasizing the need for tailored policies that consider specific contextual factors in emerging economies like Somalia.
Keywords: Domestic Investment, Public Investment, Economic Growth, Growth Domestic Product (GDP), Somalia

Introduction

Government spending can have a positive or negative impact on the economy. Increases in public investment result in higher output that can improves any country's output and employment level and boosting economic growth (Onifade et al., 2020). Government spending on infrastructure projects such as motorways and subways can enhance aggregate demand and, as a result, employment (Ramey, 2021). Increasing government spending stimulates economic growth by increasing aggregate demand. According to Neo-classical economics (Wadhwa & Kumar, 2019), when government expenditure increases, private enterprises suffer.

Some economists argue that public investment in areas such as infrastructure development and the provision of public goods and services can increase private investment by providing a more stable macroeconomic environment in which businesses feel more comfortable putting their money to work (Cervero, 2009). Investment in social and economic infrastructure programmes and projects; investment in facilitating the work of government agencies, political parties, and social-political groups at home and abroad; investment in underwriting the distribution of public services and goods; and investment from the public sector all contribute to economic growth and job creation (Ableeva et al., 2019; Macfarlane & Mazzucato, 2018). This expansion indicates how public investment dollars are widely distributed among economies (Dunbar, 2019).

It is widely understood and backed by certain simple arguments that public and private investment projects may contribute to aggregate production in various ways (Steffen, 2018). Supporting to this, public investment projects will produce non-productive final commodities or services. For example, healthcare investment spending is an example since the benefits of well-being, rather than productivity are more easily modelled (De Henau & Himmelweit, 2020). Moreover, as it support private production, many government expenditures are better classified as infrastructure expenditures (Zhang et al., 2021). If as appears to be the case, infrastructure and private sector investment complement one another, thus combining them in terms of total production would be erroneous (Brynjolfsson et al., 2018). In both circumstances, it appears that a more detailed portrayal of production that involves one that breaks down the contributions of the two types of capital would be preferable (Mamy et al., 2020).

Following the 2008 US subprime mortgage crisis, many countries raised their spending and public debt to stabilize economic development and prevent the financial system from collapsing. Discretionary fiscal easing and banking industry bailouts have resulted in large public debt/GDP ratio increases that may impair long-term economic growth in some countries including Italy, Spain, Greece, and the United States. Furthermore, a distinct difference exists between government investment and consumption spending's stimulative impacts (Odembo, 2019). Thus, sample countries' government expenditure as a percentage of GDP and average public debt as a percentage of GDP climbed from 32 per cent and 55 per cent in 1991 to 35 per cent and 61 per cent in 2014. Over the same period, these ratios grew from 41 per cent and 49 per cent, respectively, for developed economies to 43 per cent and 78 per cent. When the ratio of public debt to GDP exceeds 90%, or the ratio of government investment to GDP exceeds 30%, the average economic growth rate falls significantly. The statistics suggest two plausible nonlinear relationships among the three variables: one

between GDP growth and public debt and another between GDP growth and government investment (Yulianto, 2014)

With their positive external effects, additional infrastructure and complementary public goods would promote economic development in the short run and attract private-sector investment. On the other hand, recent theoretical and empirical research suggests that excessive government investment may harm economic growth. That is because the positive externality of public investment may be reduced if there is too much government investment and too many government monopoly activities, resulting in resource misallocation, a tangle of human resources, and an increase in rent-seeking. Furthermore, excessive government spending would increase finance requirements, resulting in higher tax revenues, a heavier household burden, and higher public debt, all of which would be averse to economic growth. As a result, the current argument is supported by the negative impact on economic growth of increased government investment and public debt. It has been demonstrated (Ali et al., 2017)

As a result, while analyzing the influence of public debt and government spending on economic expansion, the nonlinear relationship must be considered. The following are the key explanations: To begin, the crowding out effect would reduce the economic growth impact of government investment if the impact of government investment on economic growth shifted from positive to negative as government size increased. Second, China's government has pursued an expansionary fiscal policy, raising government investment as a percentage of GDP from 25% in 1990 to 28.75% in 2014 (Bulow & Summers, 1986; Hallegatte & Przyluski, 2010).

As a result, estimations of an ideal and nonlinear link between government investment, public debt, and economic development may help China's proactive and fiscal deficit policies. Third, although previous research has used a quadratic function or (panel) threshold model to determine the optimal amount of government investment and public debt, we use the panel smoothing transitional regression (PSTR) model. The model's parameters can be dynamically changed to account for the vast range of variation in these variables across nations and time. As government investment and public debt levels rise, this model allows us to predict the smoothing time course of the parameters associated with these variables and economic growth. This further enables anticipating the optimal amounts of government investment and borrowing in response to changes in the macroeconomic environment.

This study also examine hitherto unstudied components related to the elasticities of government investment public debt in terms of production. It has also provided a platform for debate on whether and how optimal government investment and public debt levels might be increased without impeding economic growth (Ncanywa & Masoga, 2018) Furthermore, from a Keynesian standpoint, public investment is an important weapon for the government to deploy to increase output to a target level. Public expenditure promotes economic growth by increasing aggregate demand, as measured by increases in output, income, and employment (Fedoryshyna, 2020). The progressive rise in a country's life level is called economic growth. Despite its popular use when discussing the economy's short-term performance, "economic growth" refers to a long-term increase in wealth. (Uzar, 2020)

Literature Review

Government investments can either aid or hurt the economy's progress. Increases in public investment result in higher output, which helps boost a country's output and employment,

propelling economic growth. A major element of the Keynesian economic paradigm is public investment, a state tool used to sustain a fixed level of economic activity. Employment rises as a direct result of rising aggregate demand, which government investment in manufacturing encourages. Government expenditure improves general consumer spending, raising output (Fedoryshyna, 2020). The relationship between government spending and economic growth. Latin America and East Asia were two of the regions chosen for data collection (Hanif, 2018). They also discovered that public investment frequently significantly improves the process of expanding economic growth; however, this is only true if the country has macroeconomic stability and a favorable trade regime. Under specific conditions, the impact of public investment on economic growth is maximized (Bulow & Summers, 1986).

Many policies addressing economic policies that stimulate public investment in developing countries have emerged in recent years (Pape, 2017). South Korea was not the first NIC to employ public investment as a growth driver early in its economic development; Hong Kong, Taiwan, and Singapore also did so. Even though public investment has a considerable positive impact on economic growth, it is not the sole determinant of economic growth. The amount of overseas trade and employment determines an economy's growth the most.

As seen above, professional opinions on the impact of public investment on the growth of the host country's economy are sharply divided. The study's primary purpose is to determine whether or not government expenditure stimulates the Somali economy. To do this, we will investigate the historical and current association between public investment trends and their consequences on Somalia's economic progress.

Research Hypothesis
When seen through the lens of an aggregate production function, economic growth theories such as the Solow model growth theory, the new growth theory, the Neoclassical growth theory, and the Endogenous growth theory do a good job of understanding the various patterns of economic change among countries. The framework for this inquiry might be the Neoclassical growth theory. According to neoclassical growth theory, every economy can reach a sustainable rate of increase with the correct mix of capital, technology, and labour. The premise is that technological advancement has a big impact on an economy. Economic growth cannot continue without technological breakthroughs since the amounts of labour and capital in the production function vary. The neoclassical growth theory assumes that an economy's expansion is primarily driven by capital accumulation and decisions about how to put that capital to use (Murshed, 2022).

Relationships between public investment and economic growth
Andersson et al (2021) evaluate the influence of PI on GDP growth using extensive sectoral data on public investment inflows in Indonesia from 1997 to 2006. As far as I can tell, these findings support the idea that extractive PI may not enhance economic growth. They also recommend that more effort be put into developing policies that maximize the benefits of PI inflows by having an appropriate sectoral composition and encouraging positive PI in sectors where no currently exists under the present institutional framework. Murshed (2022) discovered a favourable association between PI and economic growth using a panel data modelling approach. They also examined how this relationship differs depending on institutional, educational, legal, and economic aspects. Researchers discovered that countries with more flexible trade policies, more established stock markets, higher levels of education,

lower rates of population growth, and lower levels of risk-benefit more from PI. They lend support to some previously held hypotheses.

To begin with, a faster rate of economic growth is something that many low-income countries prefer. Second, it was discovered that domestic investment and educational attainment have a considerable and positive effect on economic expansion. Third, higher population growth is expected to hinder economic growth, whereas countries with more established stock markets, better openness to international trade, and lower risk tend to expand faster.

Stam & Van de Ven (2021) examine the impact of PI on Bangladesh's economic growth. Their data reveal an unsettling negative relationship between PI and GDP expansion, which should cause the Bangladeshi government to stop. Some research has found a correlation between PI and economic growth. Nigeria's foreign direct investment (FDI) and GDP development (Owutuamor & Arene, 2018). Their findings show a positive feedback loop between PI and Nigerian economic growth. So, the investigation's working hypothesis is:

H_1: *There is a significant relationship between PI and economic growth.*
H_2: *There is a significant relationship between Direct investment and economic growth.*

Methodology
Since the Somali currency was abolished in 1991, millions of dollars were used as the data unit to account for inflation and economic growth in this study's empirical research, which relied mostly on secondary sources of information. The World Bank and the SESRIC provided information (World Bank, 2021). The Data includes annual series statistics on GDP and domestic and public investment. Data on public investment (PI) are merged with GDP, domestic investment (DI), and other macroeconomic indicators to create a model for 1992 to 2020 used in this study. In this study, ordinary least squares (OLS) regression was also used to investigate the relationship and influence of the PI on economic growth as assessed by GDP.

Model Specification
This study employs Ordinary Least Squares (OLS) as its statistical method for conducting econometric tests and generating hypotheses on the relationship between explanatory variables and economic growth.
GDP = DI + PI + μ
Where GDP = Gross domestic product,
        DI = Domestic investment
        PI = Public investment

A multiple regression model was implemented in E-Views to determine the effect of PI and DI on Somalia's GDP growth. Here, GDP is the dependent variable in a multiple regression analysis, with PI and DI as the independent variables.

Data Analysis and Discussion
Descriptive and analytical methods were used to maximize the usefulness of this study. Various statistical methods were used for the time series analysis. That contains the Ordinary Least Squares method of performing multiple regression analysis on a single-equation model (OLS).

Table 1
Shows the Model Summary

	R	Change statistics					Durbin-Watson
		R Square change	F change	df1	df2	sig. F change	
I		0.701	53.755	2	38	0.000	1.201

a. Predictors: (constant), Public Investment, and Domestic Investment
b. Dependent variable: GDP

As shown in Table 1, the coefficient of determination has an R^2 value of 0.701 per cent. This number shows that combined governmental and private investment variations account for roughly 70.1 per cent of the total variation in Somalia's economic development over the study period. This finding agrees with (Abdinur and ELMAS, 2022). As a result, these factors can only explain about 70% of the volatility in Somalia's economic growth. Variations that the model cannot explain are thought to result from unaccounted-for effects. A DW of 1.201 suggests the presence of autocorrelation.

The null hypothesis in this study is that the model is not statistically significant. The decision rule is to reject the null hypothesis if the calculated F-value exceeds the tabulated F-value and accept it otherwise. Because the estimated F-statistic (53.755) is more than the F-tabulated value (2.96), the null hypothesis at the 5% level was rejected. This come out to the assumption that the model is trustworthy and statistically significant.

Table 2
Regression Analysis

Model	Standardized Coefficients Beta	T	Sig.
(Constant)		9.734	0.000
DOMESTIC INVESTMENT	0.531	6.278	0.000
PUBLIC INVESTMENT	0.233	2.502	0.023

The regression analysis results are shown in the Table 2 with a positive and statistically significant effect of domestic and public investment on GDP (GDP). Keeping all else equal, a one per cent shift in DI will result in a 53.1% shift in GDP, whereas a one per cent shift in PI will result in a 23.3% shift in GDP. Strong evidence supports the accuracy of the estimates (both DI and PI).

When comparing the t-statistics value to the tabulated t-value at 5%, it becomes clear that public investment and domestic investment coefficients play a major role in explaining positive economic changes. The findings show that public investment has a positive and statistically significant effect on GDP (GDP). This conclusion reveals that domestic investment is positively related to economic growth in Somalia and that public investment brings economic growth in Somalia. The findings also agree with those of Hassan et al (2018) This model's R-squared value is 0.701, which indicates that DI and PI account for 70.1% of the variance in economic development and 29% of the unexplained variance.

Conclusion

For the years 1992-2020, the impact of public investment (PI) on Somalia's GDP is examined. Evidence from both public investment (PI) and domestic investment reveals that they contribute significantly to GDP growth in Somalia. The impact of government spending on the economy is a complex and multifaceted issue that can have both positive and negative effects. Increases in public investment, particularly in infrastructure projects and other areas that stimulate aggregate demand, can lead to higher output, improved employment levels, and economic growth. However, the relationship between government spending, public debt, and economic growth is not linear and must be carefully considered.

Key findings from the literature review and empirical analysis highlight the significance of public investment (PI) and domestic investment (DI) in influencing economic growth (GDP). The research suggests that both DI and PI have a positive and statistically significant impact on GDP, with a one percent increase in DI corresponding to a 53.1 percent increase in GDP, and a one percent increase in PI corresponding to a 23.3 percent increase in GDP. This emphasizes the importance of both private and public investments in driving economic expansion.

It is important to note that the impact of government spending is not uniform across all scenarios. While prudent public investment can promote economic growth, excessive government spending and high levels of public debt can have adverse effects on long-term economic prospects. The threshold analysis indicates that when the ratio of public debt to GDP surpasses a certain level, or when the ratio of government investment to GDP becomes too high, the average economic growth rate tends to decline. This suggests the need for careful fiscal management to ensure that government spending remains sustainable and conducive to growth.

Moreover, the research recognizes the interplay between public investment, economic growth, and the broader macroeconomic environment. Factors such as institutional quality, trade policies, educational attainment, and population growth play a role in shaping the effectiveness of public investment in promoting economic expansion.

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