Government Spending and Economic Growth: A Case Study of Myanmar

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Abstract

Every government must allocate the budget as the expenditure on various sectors in the particular country for the development of it. According to Keynesian economics, if the government spending rises while all other spending components stay constant, output will increase. However, Wagner's law shows that increased government spending is likely to harm economic growth. Sethi (2016) discovers a long-run relationship between economic growth and government spending, as well as unidirectional causality from government spending to economic growth. The purpose of this research is to determine the trends in the growth rate of government spending and GDP from 2011 to 2023, as well as to analyse the relationship between government spending and economic growth in Myanmar (2011-2023). The data used in this study are from secondary sources such as the World Bank, the Ministry of Planning and Finance of Myanmar's website, other Myanmar Government websites, and previous studies. Different types of analysis are used to obtain scientific results, including correlation, regression, and

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Inya Economic Journal (2024), Vol.3 (No.1), 33-57.

the Granger Causality Test. The findings show that there is a rejection of the unit root for Government spending (Expenditure) at level but Economic Growth (GDP) at first difference. And there is a positive correlation between Economic Growth (GDP) and Government Spending (Expenditure) in Myanmar. And Government spending (Expenditure) granger cause Economic Growth (GDP) of Myanmar but Economic Growth (GDP) does not granger cause Government spending (Expenditure) at 5% level of significance.

Keywords: Myanmar, GDP, Government Spending, Correlation, Granger Causality

1. Introduction

1.1. Background Study

Government spending and economic growth are two crucial components of any economy. Government spending is the amount of money that the government allocates towards various public services, such as education, healthcare, infrastructure, defense, and other expenses. Economic growth, on the other hand, means that the increase in the production and consumption of goods and services in an economy over time, like GDP.

The relationship between government spending and economic growth has been a topic of intense debate among economists and policymakers for decades. According to Keynesian's economics, some argue that increased government

spending can stimulate economic growth by creating jobs and supporting public investment. By Wagner's theory, others contend that government spending can crowd out private investment, leading to lower economic growth and increased debt. In this research work, the relationship between government spending and economic growth with a case of Myanmar based on the data from 2011 to 2023.

1.2 Objectives

The main objective of this study is to investigate the relationship of government spending and economic growth in Myanmar. The objectives of the study are

- to know the trends of the growth rate of government spending and GDP from 1990 to 2023, and
- to investigate the relationship between government spending and economic growth in Myanmar.

2. Literature Review

Polu et al. (2022) examined the impact of government expenditure on economic growth in Ghana. Using the secondary data from 1970 to 2016, ARDL econometric estimation technique is used. The results showed that there is a positive correlation between government expenditure and economic growth in the short-run but there is a significant positive correlation between Gross Capital Formation; and Foreign Direct Investment and economic growth in both the short-run and long-run, there is a significant negative relationship between

population growth and economic growth (GDP growth). Chindengwike and Tyagi (2022) investigated the effects of government expenditure in Uganda on infrastructure in promoting sustainable economic. Using Johansen cointegration test, Granger- Connection, and Vector Auto Regressive (VAR), the results show that there is a long-run relationship between government expenditure in infrastructure, communication, electricity, and financial development, an indirect relationship between economic development rate and all components of public spending; and public spending on infrastructure, communication, and energy having a direct effect on economic development rate.

Suwandaru et al. (2021) found the relationship between public expenditure for education and the economic growth in Indonesia. By using Autoregressive Distributed Lag bound tests based on the secondary data from 1988 to 2018, the results show that that public expenditure on education has an insignificant relationship in the long- and short-term estimation. However, they both have different directions, which is a positive relationship in long-term and a negative relationship in short-term estimation. Meanwhile, gross fixed capital formation shows a positive relationship, and the labour variable has a negative relationship in the short and long terms. Nayak et al. (2021) investigated the effects of government spending on long-term Indian economic growth. Based on the data from 2006 to

2016 using co-integration analysis, the results point out long-run spending on economic services, general services, social services, and grants has a positive effect on GDP in the revenue account, while in the capital account, economic services and general services have a positive impact on the economy but social services and public debt and loans have a negative impact on the country's GDP.

Mishra and Mohanty (2021) studied the relationship between government spending and economic growth in subnational governments in India. Based on the secondary data, the findings show that government spending, institutional credit, and commercial electricity consumption all have a positive and statistically significant impact on economic growth, and that there is bi-directional causality between government spending and economic growth, as well as between electricity consumption and economic growth. Aijaz Syed (2021) investigated how military spending improves economic growth and industrial productivity using empirical data from India, China, and Pakistan. Based on the secondary data, the findings portray that military expenditure has a significant positive and negative impact on economic growth in the long run for China and India, but only a positive impact in the short run, with a symmetric effect in the short run and an asymmetric impact in the long run.

Barlas (2020) studied the impact of expenditure compositions on economic growth in Afghanistan. Based on the secondary data, Unit root test, Johansen co-integration test and bound test and Autoregressive Distribution Lag (ARDL) model is used to analyze the data. The results showed that there is a long-run relationship between dependent and independent variables, the previews and current expenditures on education and infrastructure are positively correlated with economic growth and security expenditure is negatively linked with growth rate. Ogar et al. (2019) examined the impact of government expenditure on the growth of the Nigerian economy, specifically examination of the impact of government capital, government recurrent expenditure and government fiscal deficit on the growth of the Nigerian economy. Using VAR technique based on the secondary data for the period 1980 to 2017, the findings showed that government capital expenditure had a positive but insignificant effect on the growth of the Nigerian economy. Also, it was revealed that government fiscal deficit had insignificant negative effect on the growth of the Nigerian economy. Lastly, the study revealed that at the short run, government recurrent expenditure had an insignificant positive effect on the growth of the Nigerian economy while in the long run it has a positive but insignificant effect on economic growth.

Nguyen (2019) investigated the effect of state budget expenditure with two major components: development investment expenditure and recurrent expenditure in Vietnam. Based on the data for a period of 2000-2017, ordinary least-squares technique is used. The results show that the state budget expenditure has positive impact on economy, recurrent expenditure also has significant positive impact on Vietnamese economy but there is no evidence for the relationship between the development investment expenditure and the economic growth. Seshaiah et al. (2018) studied the trends in general government expenditure and Real GDP growth of the Indian economy from 1980-81 to 2015-16, as well as the relationship between General government expenditure and GDP growth. Based on secondary data, the findings show that, with the exception of FDI growth rate, all explanatory factors have a positive and significant impact on GDP growth rate. There was also a negative and significant influence of general government expenditure on GDP growth rate after 2008, during the crisis period, and a positive and significant impact of general government spending on GDP growth rate after 1991, during the reform period.

Dudzevičiūtė et al. (2018) examined to provide more reliable estimates of the relationship between government spending and economic growth in the European Union (EU). Based on the secondary data from 1995 to 2015, descriptive

statistics analysis was employed and correlation and granger causality test was applied for the data analysis. The findings indicated that eight EU countries have a significant relationship between government spending and economic growth. Piabuo and Tieguhong (2017) studied the comparative analysis on the impact of health expenditure between countries in the CEMAC sub-region and five other African countries that achieved the Abuja declaration. Panel ordinary least square (OLS), fully modified ordinary least square (FMOLS) and dynamic ordinary least square (DOLS) were used to analyze the secondary data from World Development Indicators (2016) database. The results showed that health expenditure has a positive and significant effect on economic growth in both samples. A unit change in health expenditure can potentially increase GDP per capita by 0.38 and 0.3 units for the five other African countries that achieve the Abuja target and for CEMAC countries respectively, a significant difference of 0.08 units among the two samples. In addition, a long-run relationship also exists between health expenditure and economic growth for both groups of countries.

Ejaz et al. (2017) examined the impact of public expenditure on economic growth in Pakistan. Based on the secondary data from 1982-2017, the ordinary least square (OLS) test and CUSUM, CUSUM Square tests are applied to analyze the data. The result pointed out there is a significant positive

relationship between development and health expenditures on economic growth. Furthermore, defense and education expenditures have negative relationship on economic growth. Mallick et al. (2016) investigated dynamics of educational expenditure and economic growth in selected 14major Asian countries. Based on panel data of 1973-2012, Pedroni cointegration, FMOLS and panel vector error correction (PVECM) are used to analyze the data. The FMOLS data showed a positive and statistically significant effect on their economic development from their education spending. Both in the short- and long-term, the panel vector error correction (PVECM) exhibits unidirectional Granger causality from economic growth to education spending but educational expenditure only Granger causes economic growth in long-run in all countries. The FMOLS reveals a positive impact of educational expenditure on economic growth.

Alper and Demiral (2016) investigated the impacts of government's social expenditure such as education, health and social spending on economic growth performances presented by the changes in GDP per capita. Based on the panel data of 2002-2013 using the feasible generalized least squares (FGLS) estimators, the results show that the social expenditures in all three dimensions significantly impact on the economic growth. Adamu and Hajara (2015) studied to analyze the impact and direction of causality between fiscal variables and economic

growth. By using ADF unit root test, ordinary least square and multiple regression to analyze the secondary data for the period 1970-2012, the findings show that there is positive and insignificant relationship between capital expenditure and economic growth while recurrent expenditure had a significant positive impact on economic growth and there is a unidirectional causality running from the fiscal variables to economic growth in validation of the Keynesian theory.

Sethi (2015) examined the long run and causal relationship between government spending and economic growth in India. Based on the secondary data, ADF test, Phillips Perror test, Johansen's cointegration test, Granger causality test is used. The results point out there is a long run relationship between economic growth and government spending and there is unidirectional causality from government spending to economic growth consistent with Keynesian viewpoint. Gangal and Gupta (2013) analyzed the impact of public expenditure on India's economic growth. Using the ADF Unit Root Test, Cointegration Test, and Granger Causality Test, the results show that there is linear stationarity in both variables, indicating long run equilibrium, and a positive impact of total public expenditure on economic growth, but only in one direction, from TPE to GDP, as well as a positive impact of shocks from TPE to GDP and vice versa.

Okoro (2013) studied the impact of government spending on economic growth in Nigeria. Using ordinary least squares, multiple regression analysis, Granger Causality test, Johansen Cointegration Test, and Error Correction Mechanism based on secondary data, the result indicate a long-run equilibrium relationship between government spending and economic growth in Nigeria, as well as short-run dynamics that adjust to the long-run equilibrium at a rate of 60% each year. Srinivasan (2013) explored the relationship between public expenditure and economic growth in India. Using cointegration approach and error correction model based on secondary data, the findings show that there is a long-term equilibrium link between public expenditure and economic growth in India, as well as one-way causality flows from economic growth to public spending in both the short and long run, validating Wagner's rule of public spending.

Nworji et al. (2012) examined the impact of public government spending on the Nigerian economy. Using the OLS multiple regression model based on the secondary data, the findings show that capital and recurrent expenditure on economic services had an insignificant negative effect on economic growth during the study period, while capital expenditure on transfers had an insignificant positive effect on growth. However, capital and recurrent expenditure on social and community services, as well as recurrent expenditure on

transfers, had a significant positive effect on economic growth. Biswas (1992) studied the relationship between defence spending and economic growth in emerging countries. Based on secondary data using Conventional Model and the Augmented Neoclassical Model, the results indicate that military spending has a beneficial effect on LDC growth.

3. Research Methodology

This study is the explorative research which is the quantitative data for government spending and economic growth in Myanmar. The data used in this study is based on the secondary sources which are World Bank, Ministry of Planning and Finance of Myanmar Website, other Myanmar Government websites and previous studies. Different types of analysis are used to obtain scientific results, including correlation, regression, and the Granger Causality Test with the use of E Views Statistical Software.

4. Data Analysis

In this part, the relationship between government spending (total expenditure) and the economic growth of Myanmar from 2011 to 2023 (2023-2024 Fiscal Year) is analyzed. So, the descriptive analysis of GDP Growth Rate and Expenditure are mentioned in table 1 as follows.

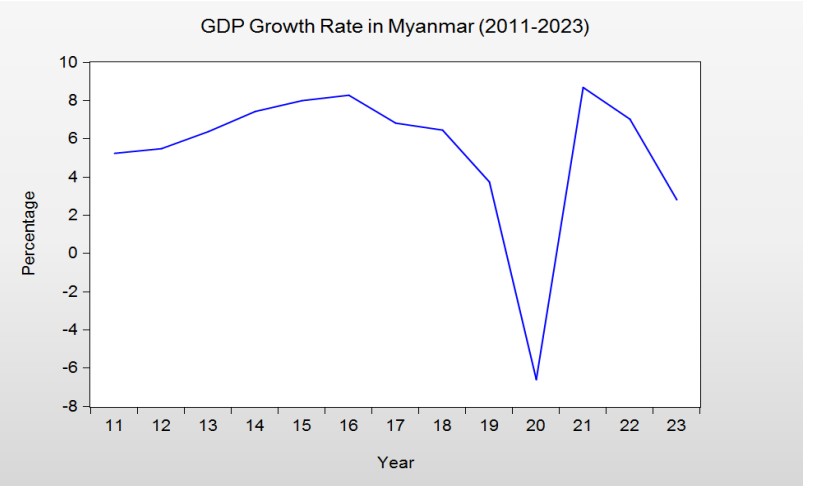
Table 1. Descriptive Statistics

	GDP Growth Rate (%)	Expenditure (Kyats in millions)
Mean	5.57	20381677.64
Standard Error	1.18	2219766.86
Median	6.62	19269515.62
Standard Deviation	4.07	8305607.08
Minimum	-6.6	8212477.65
Maximum	8.68	33175053.33

Source: Author's Calculation based on the data from Ministry of Planning and Finance of Myanmar and World Bank Website by using E View Statistical Tool

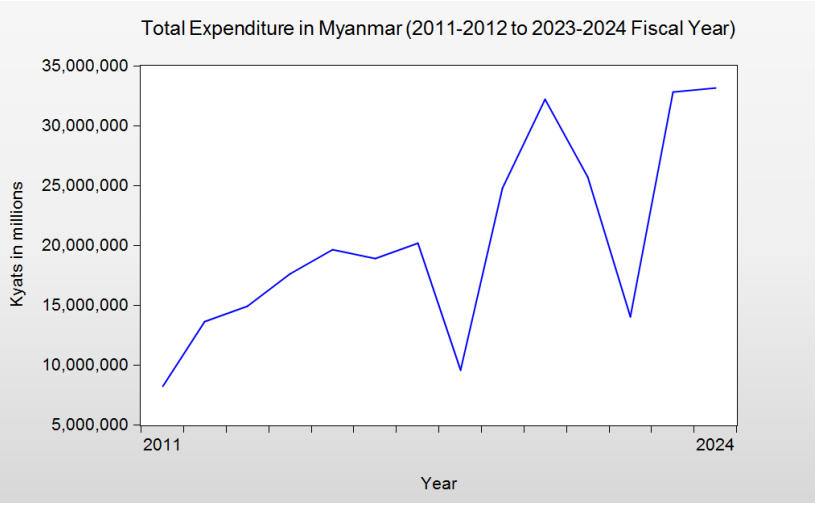
Table 1 points out that the minimum GDP growth rate is -6.6% and maximum is 8.68% from 2011-2023 while the maximum expenditure is 33175053.33 kyats in millions and minimum is 8212477.65 kyats in millions. And let's see the trends of GDP growth rate and expenditure in Myanmar (2011-2023) described in figure 1 and 2.

Figure 1. GDP Growth Rate in Myanmar (2011-2023)



Source: Author's Contribution based on the secondary data by the use of E View Software

Figure 2. Total Expenditure in Myanmar (2011-2012 to 2023-2024 Fiscal Year)



Source: Author's Contribution based on the secondary data by the use of E View Software

According to figure 1, there is a fluctuated trend for GDP growth rate in Myanmar (2011-2023) and the highest GDP growth rate is 8.68% in 2021-2022 but the lowest is -6.60% in 2020-21. Figure 2 interprets that the expenditure increased year by year because the expenditure growth rate trend fluctuated. The highest expenditure growth rate is 158.66% in FY 2018-19 and the lowest is -20.24% in FY 2020-21 although there is the lowest expenditure growth rate in the mini budget year in 2018 and 2021.

4.1. Empirical Results

4.1.1. Unit Root Test Results

The stationarity of the variables – Government spending (Expenditure) and Economic Growth (GDP) was tested using Augmented Dickey Fuller (ADF) test. Table 2 reports the results which suggest the rejection of the unit root null hypothesis of stationarity for Government spending (Expenditure) and Economic Growth (GDP) at Level.

Table 2. Unit Root Test Results

For Expenditure	ADF (level)	P Value	ADF (first difference)	P Value	ADF (second difference)	P Value
(with intercept)	-4.761	0.0018	-6.008	0.0002	-4.386	0.0051

(with intercept and time trend)	-4.514	0.0120	-5.745	0.0016	-4.106	0.0304
For GDP	ADF (level)	P Value	ADF (first difference)	P Value	ADF (second difference)	P Value
(with intercept)	-3.722	0.0138	-8.301	0.0000	-3.807	0.0232
(with intercept and time trend)	-4.002	0.0300	-3.364	0.1083	-3.785	0.0737

Source: Author's Calculation based on the data from Ministry of Planning and Finance of Myanmar and World Bank Website by using E View Statistical Tool

4.1.2 Correlation

Table 3. Correlation between GDP Growth Rate and Expenditure in India (2004-2023)

	GDP-Expenditure
Correlation	0.171513

Source: Author's Calculation based on the data from Ministry of Planning and Finance of Myanmar and World Bank Website by using E View Statistical Tool

In table 3, the correlation between Economic Growth (GDP) and Government Spending (Expenditure) in Myanmar

can be seen. Based on the data from 2004 to 2023, the result points out there is a positive correlation between Economic Growth (GDP) and Government Spending (Expenditure) in India with a value of 0.172.

4.1.3. Granger Causality

The empirical literature analyzes the relationship between government spending (expenditure) and economic growth through Granger Causality. It is used to measure short run relationship of two variables.

Null Hypothesis 1: There is no granger causality from Government spending (Expenditure) to Economic Growth (GDP) of India.

Null Hypothesis 2: There is no granger causality from Economic Growth (GDP) to Government spending (Expenditure) of India.

The results are reported in table 4.

Table 4. Granger Causality Results

Null Hypothesis:	F- Statistic	Prob.
No Granger Causality from Expenditure to GDP	15.4346	0.0009
No Granger Causality from GDP to Expenditure	4.79392	0.0347

Source: Author's Calculation based on the data from Ministry of Planning and Finance of Myanmar and World Bank Website by using E View Statistical Tool

According to table 4, the results indicate there is Granger causality from Government spending (Expenditure) to Economic Growth (GDP) of Myanmar and there is also Granger causality from Economic Growth (GDP) to Government spending (Expenditure) of Myanmar at 5% level of significance.

5. Findings

According to the results, the GDP growth rate in Myanmar is fluctuated and the expenditure increases year by year with the fluctuated growth rate trend since 2011 to the present time 2023. The highest GDP growth rate is 8.68% and the lowest is -6.60% while the maximum expenditure growth rate is 158.66% and minimum is -20.24%. From the scientific results using the econometric tools, using Augmented Dickey Fuller (ADF) test, there is a rejection of the unit root for Government spending (Expenditure) at level but Economic Growth (GDP) at first difference. And there is a positive correlation between Economic Growth (GDP) and Government Spending (Expenditure) in Myanmar. And Government spending (Expenditure) granger cause Economic Growth (GDP) of Myanmar but Economic Growth (GDP) does not granger cause Government spending (Expenditure) at 5% level of significance.

6. Conclusion and Suggestions

In conclusion, this study highlighted the relationship between Government spending and Economic Growth in

different method. One thing that the study points out is the importance of government spending as a key driver of economic growth in Myanmar. This study used time series data covering from the period from 2011 to 2023 to empirically analyze the relationship between Government Spending and Economic Growth in Myanmar. This research finding indicates that there is a positive correlation between Government Spending and Economic Growth in Myanmar which means the government has to boost the effective expenditure for economic growth of the country. And also point out there is only unidirectional between Government Spending and Economic Growth. So, the government needs to spend effectively the expenditure to boost the economic growth of the country Overall, this study provides valuable insights into the relationship between government spending and economic growth in Myanmar and Myanmar follows the Keynesian's economics.

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