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### THE RELATIONSHIP BETWEEN GOVERNMENT EXPENDITURE AND ECONOMIC GROWTH: EVIDENCED FROM FOUR EASTERN AFRICAN COUNTRIES



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# The relationship between Government Expenditure and Economic Growth: Evidenced from Four Eastern African Countries

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## ABSTRACT

Modern governments are concerned not only with performing basic responsibilities but also with promoting the economic development of their respective countries. The study aims to examine the relationship between government expenditure and economic growth in Ethiopia, Kenya, Tanzania, and Rwanda with the objective of providing inputs for policymakers on fiscal policy issues. Panel (time-series cross-section) data over the period of 2011 to 2020 was used. A linear regression model was employed, and a descriptive analysis was carried out. The findings of the study revealed that the four countries' economies grew at a fluctuating rate over the study period. Ethiopia had a substantially larger GDP and the lowest GDP per capita, while Kenya had the lowest GDP and the highest GDP per capita among the nations. Kenya's GDP per capita was double that of Ethiopia's and Tanzania's at the end of the study period. In addition, the results of the regression mode show there is a positive but insignificant relationship between government expenditure and economic growth in the four countries.

**Keywords:** *GDP, GDP per capital, regression, spending and fiscal*

**JEL code:** *R11; R12; F43; N17; O40*

## INTRODUCTION

Economic growth is one of the most important indicators of a country's progress in terms of living standards, employment, and wealth. It denotes the signs of strengthening general economic conditions. The objective and purpose of a country's revenue collection is to fund government expenditure. Modern governments are concerned not only with performing basic responsibilities but also with encouraging the economic development of their respective country [1]. Fiscal policy is a key tool for reducing short-run production and employment fluctuations. Meanwhile, fiscal policy take the spotlight in policy debates in both developed and developing economies on macroeconomic challenges such as high unemployment, insufficient national savings, unsustainable budget deficits, and massive public debt burdens. During the worldwide economic depression of the 1930s, both developed and emerging nations' government sectors played a critical role in promoting economic growth and development, as recommended by Keynes. Every economy tries to stimulate economic development in such circumstances by boosting government spending and lowering taxation. These empirical results, as well as Keynesian theoretical expression, attracted economists' and policymakers' interest in fiscal policy as a stabilizing influence [2]. Public spending is a key tool for influencing the long-term viability of government finances through fiscal balances and government debt. Furthermore, public spending may be used to achieve additional goals such as increased output, employment, and redistribution, all of which contribute to economic well-being. Tax policy, on the other hand, may be utilized to achieve fiscal policy goals such as equitable distribution of income and wealth, efficient resource allocation, and economic stabilization. Taxes have a variety of effects on economic growth rates, such as deterring people and businesses from saving and investing, inhibiting workers from learning new skills, and so on.

In developing countries, public spending is critical to economic growth. Developmental and non-developmental public expenditures are the two categories of public spending. The government's development spending is primarily focused on infrastructure, industry, health care, and educational institutions, among other things. Non-developmental expenditures are generally maintenance-related and include things like law and order, defense, and administrative



services, among other things. The influence of taxes, spending, and budget balance on numerous fiscal matters such as resource allocation efficiency and factor accumulation rate is projected to affect a country's economic growth through the effects of government size on taxation, expenditure, and budget balance [3]. Economic theory does not always lead to firm findings on the impact of government spending on economic growth. Most economists would agree that there are times when lower levels of government expenditure would be beneficial to economic growth and other times when higher levels of government expenditure would be beneficial. If government expenditure is cut to zero, it is likely that economic growth will be limited since enforcing contracts, protecting property, and constructing infrastructure will be difficult. To put it another way, some government spending is required for the rule of law to function effectively [4]. The expansion of the public sector in tandem with continued economic growth has become a commonly acknowledged truth. In this context, Wagner's law of increasing state activity, which postulates a long-term positive link between economic growth and government activity, has gotten a lot of attention. This nexus is explained by Wagner as a continuous "cultural and economic growth" in which private economic activity replaces state action. In general, empirical research on Wagner's law has concentrated on the cross-sectional and time-series relationships between government expenditure and national revenue [5]. The effect of government services on private decision-making in general and, more specifically, the impact of government expenditure on long-run economic growth Government expenditure, according to macroeconomic theory, notably the Keynesian school of thought, increases economic development As a result, government spending is viewed as an external factor that alters aggregate production [6]. The purpose of this study is to provide input for policymakers on fiscal policy issues and a reference for further study in the areas of the relationship between public expenditure and economic growth.

## LITERATURE REVIEW

According to Keynes economic theory, Government expenditure has been proven to be either positive or negative for economic growth. Many components of public expenditures, especially those that are recurring, can contribute significantly to economic development through indirect impacts on aggregate demand, according to conventional Keynesian macroeconomics. Government consumption, on the other hand, may push out private investment, reducing short-term economic benefit and reducing long-term capital accumulation [7]. Economic system is determined in diverse ways based on the actors involved in economic activities and government planning's history, culture, and connection. As a result, the economic system cannot simply be classified as a market or a controlled economy. Even market economies like the United States, the United Kingdom, and Japan are not fully free of government planning. On the other hand, Russia and China both have planned economies that incorporate many aspects of the market economy [8]. Public investment in basic infrastructure is a necessary requirement for the economy to run smoothly. Education and health-care expenditures have also been demonstrated to boost human capital creation. However, many economists believe that public spending is an area where severely ineffective white elephants might be identified. The role of government expenditures in attaining fiscal policy goals of seeking economic development, equity, and preserving macroeconomic stability has emerged as one of the major issues facing developing countries. Governments' major task in recent years has been to build capital and infrastructural bases in order to support economic growth and social well-being for their citizens. As a result, governments have increased expenditure on social and welfare programs [9].

Although economists, policymakers, and politicians have long debated the link between government spending and economic growth, the dispute continues. The debate centers on whether government size has a positive, negative, or inconsequential influence on economic growth. On this divisive issue, several schools of thought have reached different conclusions. According to the Keynesian theory, government spending boosts economic growth. The more

money a government spends, the faster the economy grows [10].

### REVIEW OF EMPIRICAL FINDINGS

There is a variety of empirical research on the impact of government expenditure on economic growth. Some empirical data supports the importance of government expenditure in economic growth, while others argue against it [11]. Using the ordinary least square (OLS) and generalized least square and (GLS) methods, investigated the impact of government expenditure on economic growth. The findings show that effective government expenditure boosts the economy, whereas the economy is impeded by non-productive government expenditure. A study in India by [12] conducted using Simple Linear Regression, which found a substantial association between total and sectoral government expenditure and each of the macroeconomic indices; the research found that government expenditure has a significant impact on the country's economic growth. The findings of a panel data regression analysis conducted in eight districts/cities in Indonesia (Baten) from 2010 to 2017 reveal that government expenditure has a positive impact on economic growth [13]. The impact of government expenditure on economic growth in Nigeria from 1970 to 2019 was studied using an Autoregressive Distributed Lag (ARDL) model, and the study's findings revealed that government expenditure has a positive and significant influence on economic growth [14]. A research by [15] examines how government spending influenced economic development in developed, developing, and underdeveloped nations from 1980 to 2012 using the unbalanced panel technique. The findings show that government expenditure has a significant positive impact on economic growth in developing nations but a significant negative impact on economic growth in developed countries. A research conducted by [16] on government spending, efficiency, and economic growth in low-income countries in Sub-Saharan Africa. The study uses Im-Pesaran-Shin and Fisher ADF tests to run panel unit root testing. The findings show that increased government spending stimulates low-income nations' economic growth in Sub-Saharan Africa.

### MATERIALS AND METHODS

The study used panel (time-series cross-section) data from Ethiopia, Kenya, Tanzania, and Rwanda over the period of 2011 to 2020. A descriptive analysis was conducted with the aim of providing an overview of the conditions of economic growth and government expenditure in the four nations during the period. A linear regression model was used to examine the relationship between government expenditure and economic growth. Secondary data about the government's expenditure growth rate, gross domestic product, and GDP per capita were obtained from the World Development Indicators of the World Bank (Table 1, Table 2).

**Table 1. GDP (Annual %), GDP per Capital, and Government Expenditure Growth % GDP**

Years	GDP growth (annual %)				GDP per capital (Current US\$)				Government expenditure Growth (Annual % GDP)			
	Ethiopia	Kenya	Tanzania	Rwanda	Ethiopia	Kenya	Tanzania	Rwanda	Ethiopia	Kenya	Tanzania	Rwanda
2011	11.18	5.12	7.67	7.96	354.48	1085.49	781.43	668.5	2.13	2.65	5.3	3.88
2012	8.65	4.57	4.5	8.64	467.08	1271.82	867.86	725.17	-0.26	13.51	13.3	15.78
2013	10.58	3.8	6.78	4.72	499.53	1354.82	970.34	722.89	12.33	-2.41	3.72	-0.17
2014	10.26	5.02	6.73	6.17	566.93	1462.22	1030.08	743.56	18.04	3.76	6.07	20.71
2015	10.39	4.97	6.16	8.86	640.54	1464.55	947.93	751.08	3.79	13.68	9.57	5.07
2016	9.43	4.21	6.87	5.97	717.12	1525.24	966.5	744.76	13.64	5.29	3.21	9.22
2017	9.56	3.82	6.79	3.98	768.52	1633.49	1004.91	772.32	8.3	6.23	1.08	7.36
2018	6.82	5.63	5.44	8.58	771.52	1794.09	1042.84	783.64	3.64	6.98	1.99	5.08
2019	8.36	4.98	5.8	9.46	855.76	1912.65	1085.88	820.15	12.09	6.96	2.35	17.51
2020	6.06	-0.32	2	-3.36	936.34	1878.58	1076.47	797.86	18.73	4.32	7.38	1.92

Source: World Bank [2020]



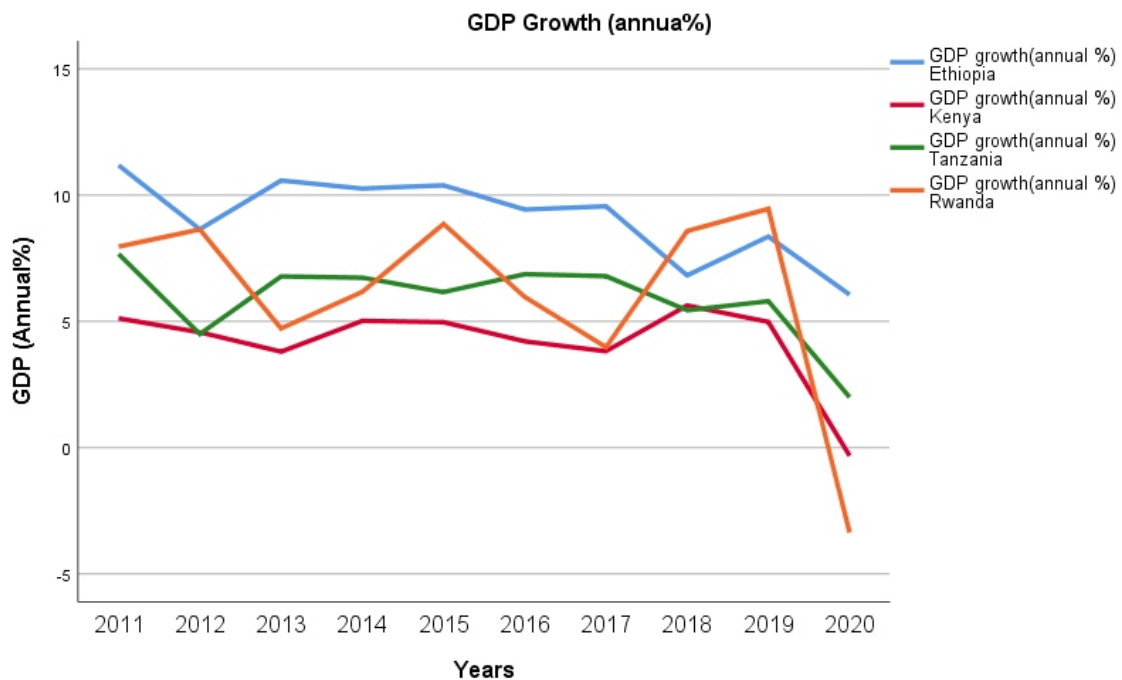
Table 1 show that the GDP annual percentage, GDP per capital, and government expenditure percentage of GDP were collected from the World Bank data base for further analysis.

**Table 2. Descriptive Statistics**

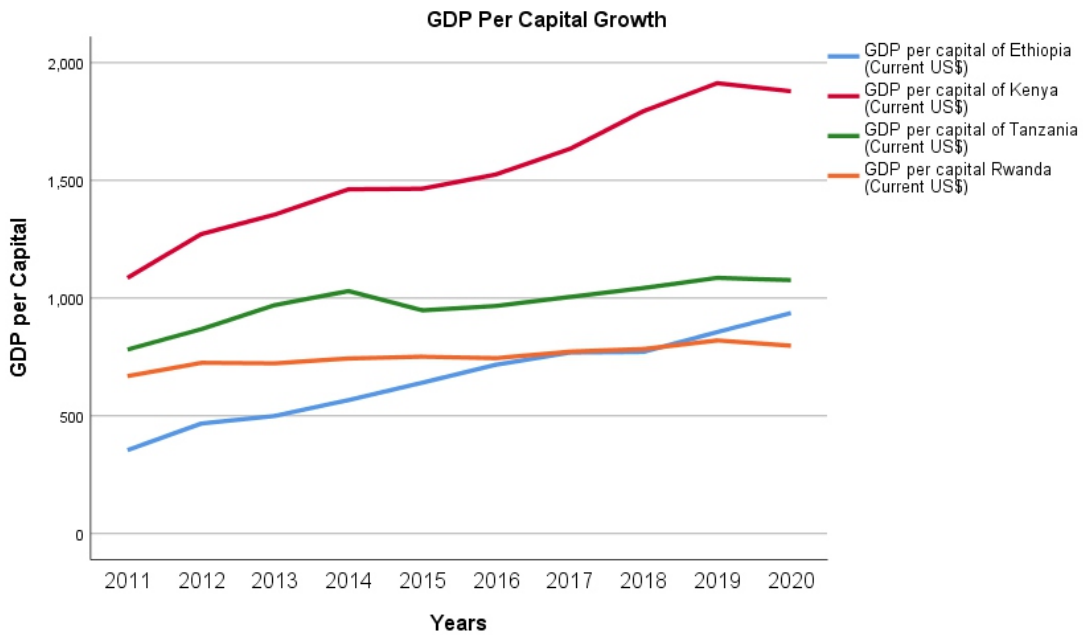
	N	Range	Min	Max	Mean	Std. Dev.
GDP Ethiopia growth (annual %)	10	5.12	6.06	11.18	9.13	1.67
GDP Kenya growth (annual %)	10	5.95	-0.32	5.63	4.18	1.69
GDP Tanzania growth (annual %)	10	5.67	2	7.67	5.87	1.63
GDP Rwanda growth (annual %)	10	12.82	-3.36	9.46	6.1	3.81
GDP per capital (Current US\$) of Ethiopia	10	581.86	354.48	936.34	657.78	184.83
GDP per capital (Current US\$) of Kenya	10	827.16	1085.49	1912.65	1538.3	269.06
GDP per capital (Current US\$) of Tanzania	10	304.45	781.43	1085.88	977.42	94.77
GDP per capital (Current US\$) of Rwanda	10	151.65	668.5	820.15	752.99	43.23

Source: Author Computation SPSS result

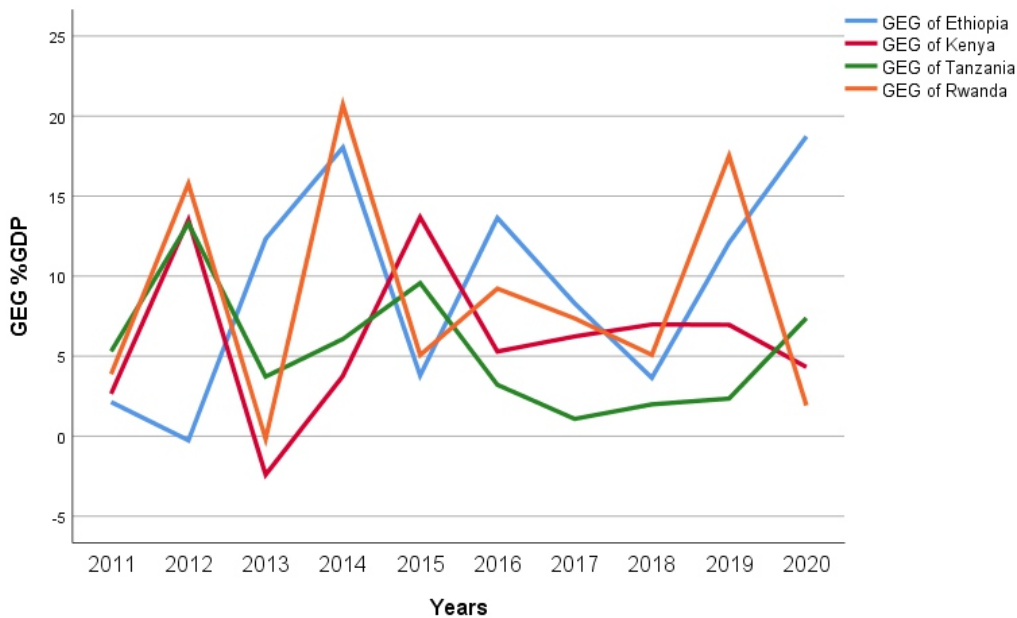
**Figure 1. World Bank [2020], GDP annual % growth of Ethiopia, Kenya, Tanzania and Rwanda**



**Figure 2. World Bank [2020], Graphic presentation of GDP per Capital of Ethiopia, Kenya, Tanzania and Rwanda**



**Figure 3. World Bank [2020], Government Expenditure Growth % Annual GDP Ethiopia, Kenya, Tanzania and Rwanda**



The above line graph shows the government expenditure growth rate as a percent of the annual GDP of the four nations over a period of 10 years. The government's expenditure growth rate experienced extremely fluctuating rate in all nations. The highest government expenditure growth rate was experienced by Rwanda's, 20.71 percent of GDP in 2014. Kenya, Rwanda, and Tanzania showed increases for the first two consecutive fiscal years 2011 and 2012, while Ethiopia's showed a decline and reached its lowest rate in 2012. In 2013, the three countries' declined sharply, and Rwanda and Kenya reached their lowest government expenditure growth rates of -2.41 % and -0.17 %, respectively, while Ethiopia's government expenditure growth began to rise substantially. All nations showed fluctuations in government expenditure and GDP

percent growth between 2014 and 2020.

**Table 3. Regression Analysis result**

Regression statistics	Ethiopia	Kenya	Tanzania	Rwanda
R	0.197	0.23	0.41	0.411
R square	0.039	0.053	0.168	0.169
Adjusted R square	-0.081	-0.065	0.064	0.065
Standard error	1.73396	1.74183	1.57292	3.68679
Sig.	0.585	0.522	0.24	0.238
Total number of case	10	10	10	10

Source: Author Computations SPSS result

The regression analysis result reveals that there is a positive but insignificant relationship with a small and positive R square between government expenditure and economic growth in all the four nations. Based on this, we can draw the conclusion that government expenditure is not a good predictor of economic growth in the four countries.

### RESULT ANALYSIS

As can be seen from Table 1 and Table 2, the GDP annual % growth rate, GDP per capita, and government expenditure growth % of GDP, over the specified periods of the four countries can be compared. Ethiopia's annual GDP growth rate has been remarkable from 2011 to 2015, with double-digit growth except in 2012 and a peak in 2011 (11.18). However, starting from 2016 to 2020, it exhibits consistent positive growth, with the lowest achievement in 2020 (6.06), but it is still the leading country among the four countries over the specified period, and with a mean value of 9.13, it is ranked among the fastest-growing countries in Africa. As the case of Kenya, the GDP annual growth shows an irregular growth pattern, with the highest growth rate in 2018 (5.63) and the lowest growth rate in 2020 (-0.32) and a mean value of 4.18. In the case of Tanzania, it shows a relatively stable GDP growth rate with the highest achievement in 2011 (7.67) and the lowest rate in 2020 (2.00) with a mean value of 5.87. In the case of Rwanda's GDP growth rate, it shows a very fluctuating rate, having achieved the highest in 2019 (9.46) and the lowest in 2020 (-3.36) with a mean value of 6.10. On the average GDP growth rate parameter, Ethiopia, Rwanda, Tanzania, and Kenya placed first, second, third, and fourth, respectively. The effect of COVID 2019, which has a significant impact on economic growth throughout the world, was shown in all of the nations under consideration, with the lowest GDP in 2020.

In terms of GDP per capita, Kenya achieved the highest in 2019 (1,878.58) and the lowest in 2011 (1,085.49). Tanzania had the highest GDP per capita of 1,085.55 in 2019 and the lowest GDP per capita of 781.43 in 2011. Rwanda's highest GDP per capita was 820.15 (2019) and the lowest growth rate was 668.50 (2011). Finally, Ethiopia has the highest GDP per capita at 936.34 (2019) and the lowest at 354.48 (2011).

### DISCUSSION

According to the World Bank [2020], Ethiopia's GDP growth rate was among the fastest growing in Africa. Based on the Worldwide countries' GDP parameter Ethiopia is ranked 60th with 107,645 million US dollars, Kenya is ranked 64th with 98,843 million US dollars, Tanzania is ranked 74th with 62,410 million US dollars, and Rwanda is ranked 143rd with 10,093 million US



dollars. Our comparison of the four nations using the average GDP per capita income parameter, the average GDP per capita income of Kenya during the study period is 1,538.30, which is the highest average among the nations. Followed by Tanzania, with an average GDP per capita of 977.42, Rwanda ranked third with an average of 752.99, and Ethiopia placed fourth with an average of 657.78. Kenya's GDP per capita income is the highest among the four nations. Tanzania's maximum GDP per capita income is almost equal to Kenya's minimum GDP per capita income, while the GDP per capita of Kenya at the end of the period (2020) is greater than double that of Ethiopia and Rwanda.

A country's GDP per capita is calculated as a country's gross domestic product (GDP) divided by its population. Ethiopia has the highest GDP but the lowest GDP per capita. The reason for the situation is that the population size of Ethiopia is almost double that of Kenya and Tanzania and ten times that of Rwanda. Based on the world-wide income level classification, Ethiopia and Rwanda fall under the low-income category (\$1,045 or less). Kenya and Tanzania fall under the category of lower-middle-income economies (\$1,046 to \$4,095).

The Ethiopian government's proactive and leadership role in creating socio-economic policies has been at the heart of the country's excellent economic and social performance. The government has been spending extensively on economic and social infrastructure, simplifying public services, reforming the tax collection system, and assisting small and medium-sized firms (SMEs), among other things, in order to make Ethiopia a middle-income country by 2025 [18]. The developmental state paradigm has resurfaced as a development option that emphasizes the role of government and market integration. Ethiopia, as one of the nations in Sub-Saharan Africa (SSA), has committed to implementing the developmental state model by tailoring the ideology to its own circumstances [19]. A Study on "Government Expenditure, Efficiency, and Economic Growth: A Panel Analysis of Sub-Saharan African Low-Income Countries" by [20] shows that increasing government expenditure accelerates economic growth in low-income countries in sub-Saharan Africa, which is in line with the result of the study. A study by [21] entitled "The Impact of Government Expenditure on Economic Growth in Nigeria, 1970-2019," The findings revealed that capital expenditure has a positive and significant impact on economic growth both in the short run and the long run, while recurrent expenditure does not have a significant impact on economic growth both in the short run and the long run. According to [22], Government Capital Expenditure and Economic Growth: An Empirical Investigation demonstrated that capital spending has a positive and significant effect on economic growth in East Africa which consistent with study.

## CONCLUSION

From the results of the analysis, all the four nations under study experienced fluctuating positive economic growth between 2011 and 2019. However, in 2020, a radical economic decline was observed. This phenomenon was caused by the corona virus pandemic around the world. With the exception of 2012, Ethiopia's GDP increased by double digits in each of the first five years of the study period (2011–2015). With regard to the GDP per capita, it showed an increase in the four nations from 2011–2019 and declined in 2020, except in Ethiopia, which still has the lowest GDP per capita among the four nations. Kenya's GDP per capita is the highest, while Ethiopia's is the lowest among the four nations. Kenya and Tanzania are middle-lower income countries, whereas Rwanda and Ethiopia are low-income countries. The results of the linear regression analysis showed that there is a positive but insignificant relationship between government expenditure and economic growth in the four respective countries.

Governments of developing nations should use scarce resources effectively and efficiently to improve the living standards of their citizens. Academicians should engage in conducting research on the study and come up with input for policymakers on the implementation of fiscal policies for the reduction of poverty, innovative technologies, and employment opportunities. International financial institutions should support developing nations with the necessary financial aid to promote economic growth. Research in this area plays a vital role in improving





government resource management. Further research with a broader scope and depth should be conducted to address the overall issues in the areas.

## REFERENCES

1. Kharel, K.R., & Adhikari, D.B. (2021). Economic impact of government expenditure on economic growth of Nepal. *International Journal of Management And Social Sciences*, 2(2), 50-58.
2. Mayandy, K. (2012). Wagner's Law in Sri Lanka: An Econometric Analysis. *International Scholarly Research Network ISRN Economics*, 2012, article number 573826.
3. Sashaiyah S.V., Reddy T.K., & Sarma, I.R.S. (2018). General government expenditure and economic growth in India: 1980-81 to 2015-16. *Theoretical Economics Letters*, 8, 728-740
4. Rajesh, G. (2018). The Impact of Government Expenditure on Economic Growth in Nepal. *Sustainability Research & Policy Network*, 1-6.
5. Jan, K. (2012). Testing Wagners's Law at Different Stages of Economic Development A Historical Analysis Of Five Western European Countries. *Institute of Empirical Economic Research*, 1-34.
6. Loizides, J & Vamvoukas. (2005). Government Expenditure And Economic Growth: Evidence From Trivariate Causality Testing. *Journal of Applied Economics*, 1-28.
7. Kweka J. P., & Morrissey O. (2000). Government Spending and Economic Growth in Tanzania, 1965-1996. *Centre for Research in Economic Development and International Trade, University of Nottingham*, 1-53.
8. Lee, C. (2019). Study of the Relationship between Government Expenditures and Economic Growth for China and Korea. *Sustainability*, 1-11.
9. Mayandy, K. (2012). Wagner's Law in Sri Lanka: An Econometric Analysis. *International Scholarly Research Network ISRN Economics*, 1-9.
10. Nyasha, S. & Odhiambo, N.M. (2019). The Impact of Public Expenditure on Economic Growth: A Review of International Literature. *Folia Oeconomica Stetinensia*, 1-21.
11. Gemmell, B.M.N., & Kneller, R. (2001). Testing the endogenous growth model: public expenditure, taxation and growth over the Long run. *Canadian Journal of Economics*, 36-57.
12. Jovi, V.S. (2019). Impact of Government Expenditure on the Economic Growth of India. *International Journal of Scientific Development and Research*, 1-6.
13. Najmuddin, Z. (2020). The Impact of Government Expenditure on Banten Economic Growth in 2010 – 2017. *The Indonesian Journal of Development Planning*, 1-11.
14. Aluthge, C., Jibir, A. & Abdu, M. (2021). Impact of Government Expenditure on Economic Growth in Nigeria, 1970-2019. *CBN Journal of Applied Statistics*, 1-36.
15. Ağırman, E. & Yılmaz Ö. (2018). Government Expenditures and Economic Growth: An Analysis of Developed, Developing and Underdeveloped Countries. *Journal of Social Sciences of Mus Alparslan University*, 1-11.
16. Kimaro, E.L, Keong, C.C, & Sea, L.L. (2017). Government Expenditure, Efficiency and Economic Growth: A Panel Analysis of Sub Saharan African Low Income Countries. *African Journal of Economic Review*, 1-21.
17. NHDR, MoFED and NPC. (2015). National Human Development Report 2014 Ethiopia: Accelerating Inclusive Growth for Sustainable Human Development in Ethiopia.



Addis Ababa: UNDP.

18. Shumuye, M. Y. (2015). The Role of Developmental State in Development: The Case of Ethiopia . International Journal of African and Asian Studies , 1-15.
19. World Bank (2020).World Development Indicators (2020). Retrieved from <http://data.worldbank.org/indicator>
20. Edmund Lawrence Kimaro, C. C. (2017). Government Expenditure, Efficiency and Economic Growth: A Panel Analysis of Sub Saharan African Low Income Countries. African Journal of Economic Review, Volume V, Issue II, July 2017 , 48-50.
21. Chandana Aluthge, A. J. (2021). Impact of Government Expenditure on Economic Growth in Nigeria, 1970-2019. CBN Journal of Applied Statistics , 1-36.
22. Waweru, D. (2021). Government Capital Expenditure and Economic Growth: An Empirical Investigation Growth: An Empirical Investigation. Asian Journal of Economics, Business and Accounting , 1-8.

## **DÖVLƏT XƏRCLƏRİ VƏ İQTİSADİ ARTIM ARASINDAKI ƏLAQƏ: DÖRD ŞƏRQİ AFRİKA ÖLKƏSİNİN TİMSALINDA**

Samuel ATSIBHA GEBREYESUS

### **XÜLASƏ**

Tədqiqatın məqsədi Efiopiya, Keniya, Tanzaniya və Ruandada dövlət xərcləri ilə iqtisadi artım arasındakı əlaqəni araşdırmaqdır. Bu məqsədə nail olmaq üçün 2011-2020-ci illər üzrə panel (zaman seriyası kəşiməsi) məlumatlarından, xətti reqressiya modelindən istifadə edilmiş və təsviri təhlil aparılmışdır. Tədqiqatın nəticələri dörd ölkənin iqtisadiyyatının tədqiqat dövrü ərzində dəyişkən sürətlə böyüdüyünü ortaya qoymuşdur. Tədqiqata əsasən Efiopiya əhəmiyyətli dərəcədə daha böyük ÜDM-ə və adambaşına düşən ən aşağı ÜDM-ə sahib olmuş, Keniyada isə dörd ölkə arasında ən aşağı ÜDM və adambaşına düşən ən yüksək ÜDM-ə malik olmuşdur. Keniyanın adambaşına düşən ÜDM-i tədqiqat dövrünün sonunda Efiopiya və Tanzaniyadan iki dəfə çox olduğu müəyyən edilmişdir. Bundan əlavə, nəticələr dörd ölkədə dövlət xərcləri ilə iqtisadi artım arasında müsbət, lakin əhəmiyyətsiz əlaqənin olduğunu göstərir.

**Açar sözlər:** ÜDM, kapitala düşən ÜDM, reqressiya, xərcləmə və fiskal

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