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Public Expenditure, Employment and Economic Growth Nexus: An Empirical Evidence from Pakistan

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ABSTRACT

Study investigates the influence of public expenditure, employment and economic growth in case of Pakistan through making use of time series data over the period 1991-2020. It investigates either the impact of public expenditure, employment and economic growth is good or bad. It explores the long run and short run relationship among public expenditure, employment and economic growth. To investigate short run and long run relationship among selected variables, we applied Autoregressive Distributed Lag model for bound testing approach. Many of the related research studies have been reviewed in this research. Use of time series data we constructed two models. The first model explore the impact on public expenditure on economic growth by taking GDP as a proxy of economic growth of dependent variable and independent variables such as Gross fixed capital formation, Gross national expenditure, Consumer price index, Interest rate and labor force participation rate. The results show that there is a positive and significant relationship between public expenditure and economic growth both in long run and short run. The objective of the second model is to investigate the impact of Employment and economic growth by taking GDP as dependent and total employment, gross capital formation, interest rate, labor force participation rate and consumer price index as explanatory variable. The results suggest there is positive relationship between employment and economic growth both in long run and short run. It is recommended that government should enhance development programs for welfare of economy.

***Keywords*:** Public Expenditure, Employment, Economic Growth, Augmented Dickey Fuller unit root test, Auto-Regressive Distributed Lag model, Diagnostics tests, Granger Causality test and CUSUM stability test.

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INTRODUCTION

Public expenditure and employment are the key elements for attaining economic growth. Both factors are directly and indirectly connected with growth. Public expenditure means spending of government on the state and central. In other words, public expenditure is the expenditure that attracts the government establishments like central, local, and state administrations to fulfill the collective social needs and wants of the people. Public expenditure is an important role in fiscal policy. The fiscal policy creates and increases the level of employment opportunities during the depression. Public expenditure depends on the budgetary expenditure which consists of surplus and deficit. Public expenditure consists of different types such as investment and income spending, development and non-development payments, transfer and nontransferable expenditure, plan and non-plan expenditure, etc. public expenditure promote rapid economic development as well as economic growth, public expenditure is used to promote trade and commerce, public expenditure promotes rural and urban development and maintains, promote the regional growth of the economy, developed the agriculture and industrial sector development, public expenditure build the socio-economic overheads like as roadways, railways and power sector, public expenditure use to developed mineral resources like as coal and oil, public expenditure use to maximize the social welfare of the economy as well as promote the level of employment and price stability and equitable distribution of income. Public expenditure occurs due to 1. Provide necessary facilities to maintain law and order for enhancement of growth. Public spending is play important role in the development transaction of human welfare. Public expenses maintain the laws and regulation of the economy as well as provide a better living standard of life, improvement in developmental programs, improvement in the infrastructure sector and create the Employment also known as employee, employer and employed. Employment means the total labor force in the economy has a wage. The employer is who has a job or gets a reward for his/her work. Employment positive role in the economy as well as enhances the economic upturn of the country. If the employment is more in the economy its means the labor force enhances and works more as a result production level of the economy more and economic development and advancement more in other cases result in the opposite. Full employment means a stable and efficient economy. Human capital use as a proxy of Expectancy and Education expenditure and employment is the engine of growth in developing countries. The level of employment stability in any economy shows a stable economy. (Khan and Chaudhry 2019). Employment is an imperative part of any economic, social, and environmental development process and production of any country. An Equitable Economic boom is the rise in the production side of the country which is compared time to time measure in nominal terms. Aggregate progress is usually counted in terms of GDP and GNP. Economic prosperity is calculated in the real term of as inflation-adjusted term and these terms are used to remove the upshot of inflation on the

prices of goods and services. An improvement in economic activity causes better use of productive resources, efficient use of labor, inputs, physical and human capital, etc. there are few techniques to promote the economic growth and first enhancement in the number of welfare programs of the country. An increment in the amount of working area caused enhanced productive labor. Economic evolution generates more profits for careers business as a results stock amounts rise, which allow companies to invest more capital in the business and hire more employees. And it allows the consumer to have extra money and buy additional goods and services. For this reason, all countries want positive economic growth. The growth of the economy depends upon a variety of indicators such as life expectancy, literacy rate, quality of life, the welfare of the state, and quality of the environment. There exists a significant and useful link between education and economic progression in the long-run period. This period if the level of education increases will be the cause to enhance the development of the economy as increase employment opportunities, production sector enhances, size of the economy improve and living standard of the economy improve (Riasat et al. 2011).

2. Review of literature

Chaudhary (2010) estimated that public spending impacts economic growth. For estimation time series data was used during the period (1974-2006). Public expenses are an independent variable and economic growth is the dependent variable. The pairwise granger causality test and Wagner hypothesis test were used for the estimated results. And which shows an increase in public expenditure does not influence the growth. And there is a significant association between public spending and real GPD. Public expenditure has significant results in long term and insignificant results in short term. It was the implication that the state should increase its size of spending in the long and short run.

Aziz et al. (2010) determined higher education's effect on economic development. For estimation time-series data from (1972-2008) has been used for the selected variables. The Cobb Douglas production function was used to determine the association between variables. The result estimated a significant and strong positive connection between higher learning and economic progress in developing nations. Its advice is that government should enhance institutions and create awareness of education among the people. And this suggestion’s significant impact on the level of employment.

Usman et al. (2011) estimated that public expenditure impacts economic growth. For the purpose indexed in time has been used to check the impact of the public expenses on the growth of the nation. Further public expenditure is divided into three operating cost streams, spending on human capital, expenses on building infrastructure, and cost on administration. The ADF test and Phillips Peron test were applied and the results show operating cost on administration and communication has an inverse influence on progress in a short period. Expenses on healthiness and other facilities have an encouraging impact on economic growth. It is funded that there is a long-term link between public cost and economic extension. It is recommended that FDI should promote investment which is important for economic welfare in the future.

Riasat et al. (2011) explained education's impact on economic growth. The time-series data was used from (1972-to 2010). The Autoregressive distributed lagged model was

used and estimated that the education cost has a statistically insignificant and inverse impact on prosperity in a short period. Education expenditure has a statistically significant impact on economic progress in the long term. It recommended that investment increase through foreign direct investment (FDI) is better for future economic progression.

Narvaez (2012) estimated the government expenditure on economic growth. The time-series data was used during the period (1975-2000). Government spending is divided into two categories (capital spending and current spending) selected as independent variable and economic growth dependent variable. The generalized method is used for estimating the result of variables. The result shows that capital and current spending have an insignificant impact on economic growth. It is suggested that government should control corruption and poor governance. Government should enhance investment in education, health, and transport to enhance the welfare of the country.

Egbetunde and fasanya (2013) Association between public expenditure and growth of economy play vital role. Public expenditure was selected as the explanatory variable and economic growth was selected as a subject variable. Used time series from (1970-2010). The autoregressive distributed lagged model was used to examine the long and short period association between government spending and economic growth. It explored their existence of negative impact of state expenditure going on economic evolution in the short-run while little significant positive influence on public spending on economic advance.

Srinivasan (2013) analyzed the link between public costs and economic growth of the country using data from (1973-2012). Using ARDL and cointegration test founded results there is a long-run association between public expenses and economic growth. Government more devotes capital non-developmental sectors like subsidy and interest payments etc. it is need of the country to more spend on development sector to enhance the development and growth of the country.

Haseeb et al. (2014) estimated the association between defense consumption and economic growth. Defense expenses are used as the independent variable and economic growth is used as a conditioned variable. Used sequence data from (1980-2013). ARDL is used to examine the association between defense spending and growth. It obtained an inverse association between defense cost and economic growth in the long term. It is suggested that government should enhance national security and enhance the social, economic, and energy sector for the development of the country.

Wang (2016) explored the association between government outflow and economic growth. Public expenses were selected as an explanatory variable and growth was selected as the dependent variable. Time-series data were used for obtaining the results from (1991-to 2010). Result obtained through Keynes law and Wagner's law. Both laws do not use at the same time in any country. There exists a unidirectional long period link between government investment and economic growth. But Keynes law does not hold. It is suggested that government enhance economic development.

Hussain (2017) explained the relationship between public expenditure and economic growth. Time series data was used from (1973- to 2014) to discover the long and short-run correlation between economic growth and state spending with help of (ARDL) which

founded resulted in government expenditure divided into (consumption expenditure, development expenditure). Development expenditure enhances economic growth in Pakistan while current expenditure decreases economic growth. Government expenditure reduces economic growth due to the negative effect of consumption (current) expenditure. It is suggested that government enhance more funds of public sector development programs (PSDP) to enhance the growth of the country.

Sarwar et al. (2017) empirically analyzed the affinity between education, employment, and growth. Indexed time data used from (1980-2010) and Johansen co-integration test and Vector error correction model estimated the correspondence between education, employment, and economic progression. Analyzed here is long-run positive affiliation among education and economic growth and there exists a long-run positive relationship between employment and economic growth. The proposition that government enhances the educational institutions as well as an educated labor force to enhance the level of education as well as the level of employment and which makes the economic prosperity more in future.

Muguro (2017) considered the influence of government spending on economic growth. Time series data used from (1963-2015) and explored results through Vector auto regression estimation and Autoregressive distributed lagged model (ARDL). Identified insignificant correlation between public spending components (development and recurrent) and economic progression. It is intimation authority should enhance those sector growths which increase economic development as well as economic growth in the country.

Pula (2017) estimated the linkage between public expenditure and growth. Time series data used from (20014-2016) and explored results with the help of Johnson co-integrated test and granger causality test. Johnson's co-integrated test explored the long-run linkage between public expenses and economic progress. Keynesian law holds and presented state consumption as an exogenous factor of economic development. There exists a unidirectional association between state costs and the economic boom. It nominees the government focus to invest more to improving the environment, transportation for economic reform, and infrastructure to enhance the private sector.

Dkhar (2018) estimated the public expenditure impact on the agriculture sector and economic growth. The agriculture sector is divided into two categories crops husbandry and dairy irrigation. Time series data used during the period (1984_2013) estimated with help of ADF unit root test and obtained that positive association among crop husbandry and growth while inverse linkage among dairy irrigation and economic progression It is the idea that government of the nation should enhance consumption on agriculture and allied sector enhance growth and development.

Khan and Chaudhry (2019) estimated that human capital impact employment and economic growth and human capital. Panel data was used during the period (2000-2010) and used applied fixed and random effect techniques and estimated results. Human capital used two proxy expectancy expenditure and education expenditure. It is advocated that unions should enhance spending on education and health on the way to increase economic growth.

Marshall (2020) explored that public outflow influences economic growth. Public expenditure proxy human capital and which consist of (education, health). Time series data used from (1985- to 2018) and predictable the connection between public expenditure and economic growth. Used augmented dickey fuller test and generalized method of moments technique and explored result, education expenditure positive impact on economic growth and significant at 5% effect on the economic progression while there is an insignificant negative link between expenditure on health and economic prosperity. It is recommended that the administration of the country should upturn expenditure on edification to enhance growth and development.

Data and Methodology

The chapter explains the measurement of the models, data sources, estimated relations, signs of the predictable variables, results, data of the variables, and the units of methods and measurements to investigate the public expenses, employment, and economic growth. Public expenditure, employment, gross national income, interest rate, gross fixed capital formation, and labor force participation rate take as the independent variables and economic growth indicator Gross domestic product is the dependent variable.

Time Period

Time series data of Pakistan taken from 1991-to 2020 is being utilized to identify the association between dependent and independent variables.

Data Sources

This study is grounded on the secondary type of data and data is collected from the world development indicator (WDI) which is supplied by the World Bank Indicator and Economic Survey of Pakistan.

Specification of Model

The study identifies the effect of GNP, Consumer price index, gross fixed capital formation, labor force participation rate, the interest rate on Economic growth. The association between the variable is,

GDP = f (GNE, GFCF, CPI, IRS, LFPR)

The above equation can be written as in the econometric model as,

$\ln GDP_t = \alpha 0 + \alpha 1 \ln GNE_t + \alpha 2 \ln GFCF_t + \alpha 3 \ln CPI_t + \alpha 4 \ln IRS_t + \alpha 5 \ln LFPR_t + \mu t$

GDP_t = Gross Domestic Product, GNE_t = Gross National Expenditure, CPI_t = Consumer Price Index, IRS_t = Interest Rate, $GFCF_t$ = Gross Fixed Capital Formation, $LFPR_t$ = Labor force participation rate, μt = Error Term t = Time series dimension of the variable, $\alpha 0$ = intercept and $\alpha 1$, $\alpha 2$, $\alpha 3$, $\alpha 4$, $\alpha 5$ = slope of the coefficients.

Results and Discussion

This portion of the study gives results of unit root test, short-run and long-run estimation of ARDL, and diagnostic analysis of the study.

Unit Root Test

In this case, time-series data from 1991-2020 has been collected from World Development Indicator. To verify the Stationarity of all variables the variables are either

stationary or not the Augmented Dickey-Fuller (1979) is applied. The result has been shown at both level and 1st difference. All the consequences of the variables are given below table Source;

Table 1: Result of Unit Root Test

Variables Name	Level		1st Difference		Decision
	Intercept	Trend and intercept	Intercept	Trend and intercept	
LLFPR	-4.64005*	-4.547566	-7.805498	-7.605897	I_0
	(0.0009)	(0.0057)	(0.0000)	(0.0000)	
LGNE	-0.795907	-1.547546	-4.915649*	-4.211530	I_1
	(0.8053)	(0.7900)	(0.0005)	(0.0133)	
LCPI	-2.284254	-2.278943	6.040781*	-5.924302	I_1
	(0.1834)	(0.4314)	(0.0000)	(0.0002	
LGFCF	-4.384483	-4.318734	-7.480703*	-7.331428	I_1
	(0.0017)	(0.0098)	(0.0000)	(0.0000)	
LIRS	0.124726	-1.502898	-4.494252*	-4.550797	I_1
	(0.9622)	(0.8052)	(0.0014)	(0.0062)	
LGDP	-1.861493	-2.334948	-5.334948*	-5.343169	I_1
	(0.3448)	(0.4034)	(0.0001)	(0.0009)	

Author's calculation using E-Views9

This shows the level of Stationarity results of all variables of the model. Few variables are Stationarity al level and others Stationarity as 1st differences. It verifies that the Log of LFPR is stationer at level (I0) and others GDP, Gross fixed capital formation, Consumer price index, Interest rate, and Gross national expenditure stationer at 1st differences (I1). The conclusion shows that integration of all variables given mixed results as level I0 and 1st difference as I1. So, we can apply the Auto-Regressive Distributed Lag model.

Table 2: Bound Test

Test Statistics value	**k**
F-statistics 36.40007	5
Critical value Bounds	
Significance	I_0 Bound I_1 Bound
10%	2.26 3.35
5%	2.62 3.79
2.5%	2.96 4.18
1%	3.41 4.68

This table shows the bound test result. When the computed value of F-statistics is greater than the upper bound value then it shows there exist a long-run relationship among the variables. F-Statistics value of the bound test 36.40007 and critical bound test value at 10% is 3.35 verifies that the value of F-statistics is greater than critical upper bound value. The F-Statistics value of the bound test is 36.40007 and the critical bound test value at 5% is 3.79 then it shows that the value of F-statistics is greater than the critical upper bound test value. So, results show there exists a link among variables. So, the impact of public expenditure on economic growth has a long-run association among the variables.

Estimation of ARDL Model

Table3: gives long and short run results of model;

Table3 Auto Regressive Distributed long run estimation.

ADRL long run				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GFCF	0.166	0.003	46.668	0.0005*
GNE	0.026	0.862	13.980	0.0051*
IRS	0.504	0.045	11.089	0.0080*
CPI	-0.105	0.007	-14.135	0.0050*
LFPR	0.142	0.008	17.497	0.0033*
C	-3.875	0.493	-7.844	0.0159*

This table shows the time-consuming connection in the middle variables. Gross fixed capital formation is a progressive link with economic development. GFCF rises then the economic growth is growing. Gross fixed capital formation is a strong positive relationship with Economic growth. GDP positive with GFCF that show 1 percent increase in GDP could bring 0.166 increases in gross Source: Author's intention using E-Views 9 80 fixed capital formation. When GDP raises then the policymakers use some improved tools like improved technologies, new and efficient instruments, and new production techniques than a country can produce new productive goods and improve the level of production. So, when the GDP of the economy is more it means gross fixed capital formation more. The government national spending is a highly substantial and positive relationship with economic growth. There is a long-run positive linkage between economic growth and public expenditure. Public expenditure like expenditure on education, health, administration, infrastructure, human development, buildings, transportation, and communication has a positive impact on economic growth. When public expenditure more above mention sectors it will be a positive and long-run impact on economic growth Usman et al. (2011). There exists a positive relationship between public expenditure and economic growth. More spending on welfare projects leads to more economic growth Idris and Bakar (2017). There exists a positive relationship between the rate of interest and economic growth. Interest rates depend upon two factors financial deepening and dependency ratio. There exists a positive relationship between financial deepening of interest rate and economic growth while an insignificant relationship between dependency ratios NM Odhiambo (2009). Interest rate is a tool that

makes the economy stable and up. There exists a negative relationship between the consumer price index and economic growth. When income increases in the economy the price of the goods will decrease as a result of inflation factor down in the economy. So, there is negative correlation between CPI besides GDP-G. A moderate inflation rate leads to creating saving and enhancing investment and which is a case of a stable economy. When price high in the economy this will leads to decrease economic progress. There exists a statistically long-run association concerning inflation (CPI) and economic progression Saeed (2007). Labor force impact on GDP- as if 1percent increase in GDP leads to a 0.142 percent increase in LFPR. LFPR enhances the level of growth enhances. More working labor in the economy increase leads to an increase in the growth of the economy Nasreen and Anwar (2014).

Tablet displays the short-run dynamics model. Where CointEq (-1) shows the convergence of the model and the value of CointEq is -1.053224, the value of std. Error is 0.941285 and t. statistics is - 9.617943 it has a significant probability value which is 0.0106. The findings of the work show that the variables are correct and accepted for the model. GDP has a positive sign because there is a significant positive relationship between economic growth and public expenditure. They're a significant positive relationship between GDP and Gross national expenditure. Gross fixed capital formation has a positive sign (0.457662) because the positive relationship between GDP and gross fixed capital formation has a significant value (0.0105). Trade and GDP are a positive relationship between them. And trade (0.696512) has a significant probability value (0.0139).

4.3 Diagnostic Analysis for Model

Several diagnostic tests have been using applied to examine the serial correlation. Heteroskedasticity, normality and normality of residuals. Serial correlation has been examined through the Breusch Godfrey LM test, Heteroskedasticity through Breusch Pagan Godfrey Test, and normality of the residuals by the Jarque-Bera test. Results of the test are as below;

Table 3:Short Run ARDL

Variables	coefficients	std. Error	t. statistics	prob
D(GDP)	5.208	0.621	8.383	0.0139
D(GFCF)	0.457	0.049	9.675	0.0105
D(GNE)	0.673	0.420	-2.412	0.1369
D(CPI)	0.338	0.064	5.287	0.0340
D(LFPR)	0.696	0.081	8.392	0.0139

Heteroskedasticity; Breush-Pagan Godfrey				
Test statistics	value	prob. F (23, 2)	Null hypothesis	Decision
CointEq(-1)	-1.053	0.945	-9.613	0.0106

F-Statistics	1.407726	0.4981	Homoscedasticity	Do not reject H_0

Breusch- Godfrey serial Correlation LM test

Test statistics	value	prob. F (1.1)	Null hypothesis	Decision
F-Statistics	1.412000	0.4454	Homoscedasticity	Do not reject H_0

Normality test

Test statistics	value	prob.	Null hypothesis	Decision
Jarque-Bera	0.479500	0.786824	Normal Distribution	normally distributed

Heteroskedasticity; Breush-Pagan Godfrey

The Heteroskedasticity Brush-Pagan Godfrey test has a 0.4981 probability value which is greater than 5 percent. So, it shows there is no issue of heteroskedasticity in the model and we can accept the null hypothesis and do not reject null hypothesis H0.

Breusch- Godfrey serial Correlation LM test

The Brush-pagan Godfrey serial correlation LM test shows a 0.4454 probability value. And which is greater than 5 percent. So, we do not reject null hypothesis H0.

Normality test

Jarque-Bera test is used for checking the normality of the variables. The probability value of the Jarque-Bera is 0.786824 that is more than 5percent. The probability value of J-B shows all the residuals are normally distributed. So, we do not reject null hypothesis H0 and reject alternative hypothesis H1.

5. Conclusion and Policy Recommendation

The major object of the study explores public expenditure, employment, and economic growth both in the long run and short-run results in Pakistan by taking time-series data from 1991-to 2020. Compare the link between public expenditure and economic growth. Public expenditure is used as an independent variable also gross national expenditure, CPI, interest rate, labor force participation rate, and gross fixed capital formation while, GDP is a dependent variable. Results show that there is a significant positive relationship between the dependent and explanatory variables. Gross national expenditure consists of all public expenditure such as education, defense, health, military, research and development, final consumption, and transport. If government enhances expenditure on those sectors it will enhance the economic growth of the economy. And there exists a significant relationship between public expenses and economic growth.

- Policy suggestion is government should enhance the export promotion and decrease the level of import of the country. Export more and import less causes economic growth in the economy.
- Government should increase spending on upturn human and physical capital to boost economic growth, also increment in spending for the enhancement of Educational

Institutions and create awareness of education among people. It is also the need of the economy to enhance investment through domestic and international levels.

- It is advised that government should increase the employment opportunities for more economic growth and welfare programs.
- It is advised should more spend on the agriculture side because it is the backbone of the country and 70% is directly and indirectly linked with the agriculture sector.
- Government sector takes some steps to control the population because more population is the cause of the low level of employment opportunities and economic growth.

References

AHMED, Z., & ACET, H. (2020). Public Expenditure and Economic Growth Relationship in Developing Countries: The case of Bangladesh.

Ahuja, D., & Pandit, D. (2020). Public expenditure and economic growth: Evidence from the developing countries. *FIIB Business Review*, *9*(3), 228-236.

Ali, G. U. L. Z. A. R. (2015). Gross fixed capital formation & economic growth of Pakistan. *Journal of Research in Humanities, Arts and Literature Applied*, *1*(2), 21-30.

Aziz, B., Khan, T., & Aziz, S. (2008). Impact of higher education on economic growth of Pakistan.

Babatunde, S. A. (2018). Government spending on infrastructure and economic growth in Nigeria. *Economic research-Ekonomska istraživanja*, *31*(1), 997-1014.

ÇEVİK, S., & AMANAT, A. H. The Impact of International Aid on Economic Growth of Afghanistan. *LAÜ Sosyal Bilimler Dergisi*, *11*(2), 99-114.

Chamorro-Narvaez, R. (2012). The composition of government spending and economic growth in developing countries: The case of Latin America. *OIDA International Journal of Sustainable Development*, *5*(6), 39-50.

Chaudhary, S. K. Public Expenditure and Economic Growth in Nepal.

Dahliah, D. (2021). The Role of Public Expenditure and Private Investment on Economic Growth in Makassar. *Point Of View Research Economic Development*, *2*(1), 1-10.

De, U. K. (2018). Public expenditure on agriculture and economic growth: a case study of Meghalaya. *Agricultural Economics Research Review*, *31*(2), 271-279.

Egbetunde, T., & O Fasanya, I. (2013). Public expenditure and economic growth in Nigeria: Evidence from auto-regressive distributed lag specifi cation. *Zagreb international review of economics & business*, *16*(1), 79-92.

Ejaz, S., Amır, H., & Shabbır, M. S. (2017). Public expenditure and its impact on economic growth: a case of Pakistan. *Kashmir Economic Review*, *26*(1).

Ekpete, S. M., Wachukwu, I. P., & Iyo, I. A Generalized Method of Moments Approach of Examining the Impact Public Expenditure on Health and Education Exert on Nigeria's Economic Growth.

Francis, S. J., & Amirthalingam, K. Public Expenditure and Economic Growth Nexus in Sri Lanka during 1980-2017: A Time Series Analysis.

Gaies, B., & Nabi, M. S. (2021). Banking crises and economic growth in developing countries: Why privileging foreign direct investment over external debt?. *Bulletin of Economic Research*, *73*(4), 736-761.

Gokal, V., & Hanif, S. (2004). *Relationship between inflation and economic growth* (Vol. 4). Suva: Economics Department, Reserve Bank of Fiji.

Gómez-Trueba Santamaría, P., Arahuetes García, A., & Curto González, T. (2021). A tale of five stories: Defence spending and economic growth in NATO´ s countries. *PloS one*, *16*(1), e0245260.

Gupta, R., & Shastri, S. (2020). *Public Expenditure and Economic Growth in India: An Empirical Analysis Using Vector Autoregression (VAR) Model* (No. jber189). Global Academy of Training and Research (GATR) Enterprise.

Haseeb, M., Bakar, A., Azam, M., Hassan, S., & Hartani, N. H. (2014). The macroeconomic impact of defense expenditure on economic growth of Pakistan: An econometric approach. *Asian Social Science*, *10*(4), 203-213.

Henrekson, M. (1993). Wagner's law-a spurious relationship?. *Public finance*, *46*(3).

Hussain, I. H., Khan, Z., & Rafiq, M. (2017). An empirical analysis of the impact of compositional changes in public expenditure on economic growth: Time series evidence from Pakistan. *Business & Economic Review*, *9*(1), 1-20.

Hussain, M. I., & Zafar, T. (2018). The interrelationship between money supply, inflation, public expenditure and economic growth. *European Online Journal of Natural and Social Sciences*, *7*(1), pp-1.

Idris, M., & Bakar, R. (2017). Public sector spending and economic growth in Nigeria: In search of a stable relationship. *Asian Research Journal of Arts & Social Sciences*, *3*(2), 1-19.

Javaid, M., & Li-Fan, X. U. (2020). Impact of External Debt on Economic Growth in Pakistan for the Period (2010-2018). *DEStech Transactions on Social Science, Education and Human Science*, (icesd).

Jehan, Z., & Khan, F. A. (2020). Demographic Changes and Economic Growth in Pakistan: The Role of Capital Stock. The Pakistan Development Review, 59(2), 155-178.

Khan, R., & Chaudhry, I. S. (2019). Impact of human capital on employment and economic growth in developing countries. Review of Economics and Development Studies, 5(3), 487-496

Kunwar, K. B. (2019). Impact of government expenditure in economic growth of Nepal: ARDL approach. Contemporary Research: An Interdisciplinary Academic Journal, 3(1), 33-40.

Lingxiao, W. A. N. G., Peculea, A. D., & Xu, H. (2016). The relationship between public expenditure and economic growth in Romania: Does it obey Wagner's or Keynes's Law?. Theoretical & Applied Economics, 23(3).

Maneejuk, P., & Yamaka, W. (2021). The Impact of Higher Education on Economic Growth in ASEAN-5 Countries. Sustainability, 13(2), 520.

Mazorodze, B. T. (2018). Government expenditure and economic growth in Zimbabwe. African Journal of Business and Economic Research, 13(2), 183-202.

Mohamed, R. A., Abd El-aziz, A. I., Ramadan, H. N., Abd El-sayed, M. H., & Emam, H. A. (2021). Impact of Human Capital on Economic Growth in Egypt: An ARDL Approach. European Journal of Economics, Finance and Administrative Sciences, (108).

Muguro, J. W. (2017). Effect Of Public Expenditure On Economic Growth In Kenya: 1963 2015 (Doctoral dissertation, Kca University).

Narasimhuiu, M. (1977). Ricardo's Theory of Economic Growth. Indian Economic Journal, 25(1), 251.

Nasreen, S., & Anwar, S. (2014). Causal relationship between trade openness, economic growth and energy consumption: A panel data analysis of Asian countries. Energy Policy, 69, 82-91.

NGUYEN, H. H. (2019). The role of state budget expenditure on economic growth: empirical study in Vietnam. The Journal of Asian Finance, Economics, and Business, 6(3), 81-89.

Nurudeen, I., Sani, M., & Funmilayo, A. RELATIONSHIP BETWEEN GROWTH AND EXPENDITURE: AN EXAMINATION OF WAGNER'S LAW IN NIGERIA.

Obadan, M. I., & Okojie, E. I. (2010). An empirical analysis of the impact of trade on economic growth in Nigeria.

Odhiambo, N. M. (2009). Interest rate reforms, financial deepening and economic growth in Kenya: an empirical investigation. The Journal of Developing Areas, 295-313.

Ojeaburu, F. (2019, November). Employment Opportunities and Economic Growth in Nigeria: 2005 to 2009. In 1St International Conference on Institutional Leadership and Capacity Building in Africa held at Ignatius Ajuru University of Education, Port Harcourt, Nigeria on the 6th To 9th November.

Oladele, M. F., Mah, G., & Mongale, I. (2017). The role of government spending on economic growth in a developing country.

Palamalai, S. (2014). Causality between public expenditure and economic growth: The Indian case. Srinivasan, P.(2013),"Causality between Public Expenditure and Economic Growth: The Indian Case", International Journal of Economics and Management, 7(2), 335-347.

Prescott, E. C. (1988). Robert M. Solow's neoclassical growth model: An influential contribution to economics. The Scandinavian Journal of Economics, 90(1), 7-12.

Pula, L., & Elshani, A. (2018). The relationship between public expenditure and economic growth in Kosovo: Findings from a johansen co-integrated test and a granger causality test. Ekonomika, 97(1), 47-62

Ramlan, H., & Suhaimi, M. S. I. B. (2017). The relationship between interest rates and inflation toward the economic growth in Malaysia. Journal of Humanities, Language, Culture And Business (Hlcb), 1(1), 55-63.

Riasat, S., Atif, R. M., & Zaman, K. (2011). Measuring the impact of educational expenditures on economic growth: evidence from Pakistan. Educational Research, 2(13), 1839-1846.

Rostow, W. W., & Rostow, W. W. (1990). The stages of economic growth: A non-communist manifesto. Cambridge university press.

Rowley, C. K., & Tollision, R. D. (1994). Peacock and Wiseman on the growth of public expenditure. Public Choice, 78(2), 125-128.

Saaed, A. A. (2007). Inflation and economic growth in Kuwait: 1985-2005-Evidence from co-integration and error correction model. Applied Econometrics and International Development, 7(1).

Sarwar, A., Jadoon, A. K., & Azeem, A. (2017). Education, Employment and Economic Growth Nexus: A case study of Pakistan. Journal of Independent Studies & Research: Management & Social Sciences & Economics, 15(1).

Sato, R. (1964). The Harrod-Domar model vs the neo-classical growth model. The Economic Journal, 74(294), 380-387.

Schmidt, F. L., & Hunter, J. E. (1981). Employment testing: Old theories and new research findings. American psychologist, 36(10), 1128.

Scott, M. (1992). A new theory of endogenous economic growth. Oxford Review of Economic Policy, 8(4), 29-42.

Sodipe, O. A., & Ogunrinola, I. O. (2011). Employment and economic growth nexus in Nigeria. International Journal of Business and Social Science, 2(11).

Tomić, Z. (2015). Analysis of the impact of public education expenditure on economic growth of European Union and BRICS. Economic analysis, 48(1-2), 19-38.

Ucak, A. (2015). Adam Smith: The inspirer of modern growth theories. Procedia-Social and Behavioral Sciences, 195, 663-672.

Usman, A., Mobolaji, H. I., Kilishi, A. A., Yaru, M. A., & Yakubu, T. A. (2011). Public expenditure and economic growth in Nigeria. Asian Economic and Financial Review, 1(3), 104.

Zungu, L. T., Greyling, L., & Sekome, M. S. (2020). Government expenditure and economic growth: Testing for nonlinear effect among SADC countries, 1994-2017. African Journal of Business and Economic Research, 15(3), 37-96.