

GOVERNMENT EXPENDITURES AND ECONOMIC GROWTH IN ACEH PROVINCE: AUTOREGRESSIVE DISTRIBUTED LAG APPROACH

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ABSTRACT

This study examined the effect of direct and indirect expenditures on economic growth and used time-series data from 1986 to 2020. The data analysis method used was Autoregressive (AR) and Distributed Lag (DL) or ARDL. The results indicated that in the short term, economic growth lag 1 significantly and positively affected economic growth in Aceh province, direct expenditures (development expenditure) in lag 1 significantly and positively affected economic growth, and indirect (routine) expenditures on lag 2 significantly and positively affected economic growth. In the long term, both direct and indirect expenditures significantly and positively influenced economic growth.

Keywords: Economic growth, direct expenditure, indirect expenditure, and autoregressive distributed lag

1. Introduction

Economic development aims to improve people's welfare, and to achieve these goals requires great capital and investment (Amri & Aimon, 2017; Amri, 2020). Sharing sources of capital and investment is obtained for economic development both from the government and foreign and domestic investments. Article 33 of the 1945 Constitution identifies the Government as being responsible for driving economic development. To realize the economic development capital through the state revenue and expenditure budgets, government should allocate development expenditures and routine expenditures (Muliadi & Amri, 2019; Nazamuddin, & Amri, 2020). However, based on the Law on Fiscal Balance between the Central and Regional Governments No. 33/2004, every provincial government in Indonesia has Government expenditures (direct and indirect expenditures) from central government transfers, which depend on the autonomous

status of the province. Based on Aceh Government Law Number 11 of 2006, Aceh Province is a Special Autonomous Region in Indonesia, where the central government has launched large financial transfers to the Aceh government, while the funds have not boosted economic development. In 2018, the economic growth rate was 4.61%, with direct expenditures of Rp. 10.95 trillion and indirect expenditures of Rp. 4.14 trillion, and in 2019, economic growth decreased to 4.14%, with direct expenditures of Rp. IDR 17.11 trillion and indirect expenditures of IDR 6.62 trillion. Due to this situation, there was a decrease in economic growth in 2020 by 0.37%, from direct expenditures of Rp. 17.28 trillion and indirect expenditure as much as Rp. 7.57 trillion (Aceh Dalam Angka, 2018-2020). It is following the research of Bekmann et al. (2014) in their study for the case of 11 nations in OECD countries and developing countries, in the period 1971-2010, which found that government spending can increase economic growth, but the effect was higher on increasing economic growth of state institutions.

The takeover by the Aceh Provincial government to encourage economic development through government spending has still not been able to improve people's welfare. The number of poor people in 2018 was 15.68% and decreased in 2019 by 15.01%, and increased again in 2020 to 15.43% (Central Bureau of Statistics in Aceh, 2018-2020). It was because the planning and the use of government expenditures had not been on target. In line with the research in Kenya and Nigeria that government expenditures in the public sector did not support economic growth (Nurudeen & Usman, 2010; Mudaki & Masaviru, 2012). Also, Al-Shatti (2014) pointed out that there was an insignificant effect of government expenditures on economic growth, as well as research by Widodo et al. (2011) there was no significant effect of government expenditures from the public sector on reducing poverty levels in Central Java.

2. Literature review

2.1 Historical review

There was a relationship between direct and indirect expenditures with economic growth, as stated by Adolph Wagner (1835-1917). There was a functional relationship of economic growth with government expenditures in the short term and continued to the functional relationship in the long run (Wagner, 1911). Wagner's law aimed to improve the public sector in a modern progressive government and was not affected by public expenditures quantitatively in a fixed time. According to the historical experience of Wagner's study that from period to period, public expenditures continued to increase beyond prediction. Usman et al. (2011) proved empirically that various levels of government had the same tendency to increase expenditures but showed different growth rates. According to Keynesians, the government should intervene to improve the

economy by increasing government expenditures so that the money supply increases to have goods and services, thereby increasing aggregate demand in expanding macroeconomic development. Huang, (2006) follows the Keynesian opinion that public expenditures can stabilize fluctuations in aggregate expenditure in the short term and increase economic activities. It follows empirical testing by Omoke (2009), who found that government expenditures can improve economic growth.

According to classical economists, there was an inverse relationship from the Keynesian view, where government expenditures did not cause economic growth. Moreover, classical economics found that national output would not increase with government expenditures, and it was only a destabilizing force, not a driving force for economic development. Classical economists argued that the increase in income was not due to government expenditures, where government expenditure was a substitute for private business only (Froyen, 2008). Furthermore, classical economics suggested that no causal relationship between government expenditures and economic growth in a country's long run. Classical economists said that the state must allow economic activity to grow on its own, and if the government intervenes, this will hamper economic growth because of producing small output.

2.2 Theory of economic growth

Various schools of economics have described the theory of economic growth, which indicated that economic growth occurs due to the increase in capital accumulation in the economy. Todaro (2010) suggested that the way to accelerate economic growth is by increasing savings, which will increase capital and expand investment. Classical economic income is economic growth caused by population, availability of capital goods, agricultural land, and human resources and technology. Furthermore, the classical view based on the law is decreasing where the increases in output will affect economic growth (Arpaia & Turrini 2008; Clude & Clude. 2013).

The neoclassical economic growth theory developed by Robert Solow and Trevor Swan indicated that economic growth was caused by an increase in factors that affect aggregate supply. The neoclassical theory states that trade is the main factor in increasing economic growth because a country's output increases and can also exploit scarce resources and international markets to increase exports. The neo-Keynesian economic growth theory developed by Horrod-Domar suggested that investment in increasing capital was needed to increase economic growth (Martin, 2009). The Horrod-Domar model assumed a constant return to scale on the relationship between investment and economic growth (Todaro, 2010). Furthermore, investment is the key to

increasing economic growth because investment can create income and increase production capacity by increasing capital stock.

2.3 Government expenditure

Within a country, government expenditures function to stabilize prices, output levels, and employment. Thus, government expenditure is the controller of fiscal policy in the economy (Lozides & Vamvoukas, 2005; Jiranyakul & Brahmaseerene, 2007; Jiranyakul, 2007). The size of government expenditure depends on the number of economic activities carried out by the government. To regulate government intervention is to increase development expenditure through government expenditure so that the pace of the economy will be accelerated (Kusuma, 2016). The addition of physical capital in basic infrastructures and public facilities and services can increase economic growth and obtain community welfare (Sukirno, 2013; Rosen, 2014).

There is a relationship between fiscal policy and controlling government expenditure, and the improvement of a country's economy is very diverse (Peltzman, 2016). Also, the role of fiscal policy in increasing economic growth in the long term to the country's macroeconomic activities is an endogenous growth model (Paparas et al., 2015). Government activities to buy goods and services are costs that must be incurred in connection with the policies made by the government (Alshaharani et al., 2014; Maipita, 2020). Spending in the budget can affect the economy and investment in the long run (Romero-Avliá & Strauch, 2008). Furthermore, the research finding of Zulfan & Maulana (2019) also pointed out that government expenditure has a significant impact on economic growth.

2.4 Empirical evidence

Various empirical evidence has investigated the relationship between government expenditure and economic growth. A study conducted by Ram (2006) found a positive relationship between government expenditure and economic growth. Furthermore, Loto (2011) found a positive and significant relationship between investment and economic growth in expenditure, especially public expenditure in the form of disaggregated capital infrastructure. In this case, the influence of public expenditure on economic growth varies widely, and infrastructure positively and significantly influenced economic growth. Chipaumire et al. (2014) revealed that government expenditure was significantly and negatively related to economic growth. Ebong et al. (2016) noted that in the long term, capital expenditures consisting of expenditures on education and economic infrastructure positively and significantly influenced economic growth. In the long term, expenditure on agriculture and health did not affect economic growth. In the short term, capital expenditures from education and infrastructure capital expenditure significantly

influenced economic growth, while capital expenditures for agriculture, economic infrastructure, and health did not influence economic growth in the short term. Kunwar (2019) found that in the long term, lag 1 GRDP was significant from the added value of GRDP in Nepal. The coefficient (-0.782018) means 1%, the increase in GRDP lag 1 caused a decrease in GRDP by 78.20%. LNGE lag 1 was significant and positive for GRDP, where a 1 percent increase in GE can increase GRDP by 34.99 percent. In the short term, LNGE had a significant positive effect on LNGDP, which indicated that the 1% increase in GE could increase the GRDP of Nepal by 27.18%.

The study by Tambunan & Jakaria (2019) found that in the short term, personnel expenditure significantly and positively influenced Gross Domestic Product (GDP), where personnel expenditure had a direct impact on GDP. Capital expenditure had a negative and significant effect on GDP at lag 1. Goods expenditure had a significant and positive effect on GDP, where an increase in goods expenditure can increase GDP in the same period. In the long term, personnel expenditures had a significant positive effect on GDP, while capital expenditures had a significant and negative effect on GDP, where the expenditure model caused GDP to decrease by 10.26 billion. Goods Expenditure did not significantly affect GDP, however, towards a negative influence. Joshua (2019) found that government expenditure significantly affected economic growth in Nigeria both for the short and the long term, wherein the short term, government expenditure affected economic growth by 29%, while in the long term was 96%. Kolapo et al. (2021) found that in the short term, government expenditure influenced economic growth significantly. Specifically, capital expenditure negatively affected economic growth. In the short term, routine and total expenditures positively affected economic growth. In the long term, routine and capital expenditure significantly and negatively influenced economic growth, while total government expenditure and external debt positively influenced economic growth. Besides, routine expenditure did not significantly affect economic growth in the long run.

3. Data and methodology

This study used time-series data during 1986-2020 sourced from *Aceh Dalam Angka* issued by the Central Bureau of Statistics Agency of Aceh Province and the Regional Planning and Development Agency (BAPPEDA) of Aceh Province. Autoregressive Distribution lag (ARDL) applied to examine the effect of direct and indirect expenditures and economic growth. This model consists of AR, namely Autoregressive (AR), by analyzing some past data on the dependent variable, and Distributed Lag (DL) is a regression that examines the effect of current data with data in the past on the independent variables (Gujarati & Porter, 2009). There are several criteria used to determine the optimum lag, namely Likelihood Ratio (LR), Final

Prediction Error (FPE), Akaike Information Criterion (AIC), Schwartz Information Criterion (SIC), Hanna-Quinn Information Criterion (HQ).

Stationery Tests

Chor & Md. Darit, (2015) stated that the stationary test of the Philips-Perron model is more suitable when using the Autoregressive Distributed Lag (ARDL) model, where there is stationery for each variable studied in First Difference. The hypotheses based on the data for the stationary test were:

H_0 = Data had a unit root test (not stationary data)

H_1 = Data did not have unit root test (data stationery)

If the value of $|t| >$ absolute value of the critical value of Mackinnon, which rejects H_0 , then the data is stationary because it does not contain a unit root. If there is non-stationary data at the level $I(0)$, then it can be done so that the data is stationary through first difference $I(1)$, or second difference $I(2)$, and then to get stationary data.

Cointegration Bound Tests

To estimate using the ARDL model, a Bound Test was first integrated to see the long-term relationship between the variables. The bound test hypothesis used the F-test approach by comparing the F-statistical value with the F-table value (Pesaran & Shin, 2001), namely:

$H_0 = \alpha_1 = \alpha_2 = \alpha_n = 0$: there was no long term relationship

$H_0 = \alpha_1 \neq \alpha_2 \neq \alpha_n \neq 0$: there was a long term relationship

In the results of the bound test, if the upper critical value $I(1)$ is higher than the F-statistic value obtained, then H_0 will be rejected, which indicates a long-term relationship in the model or cointegration occurs. On the other hand, if the F-statistical value is lower than the lower critical value $I(0)$, it will accept H_0 , which means no long-term relationship between the variables studied in the model. Furthermore, if the F-statistical value is between the upper and lower critical values, the results cannot be concluded. In general, the ARDL model in the long-term equation can be written as follows:

$$\ln\text{GRA}_t = \alpha_0 + \alpha_1 t + \sum_{i=1}^m \alpha_i + \ln\text{GRA}_{t-1} + \sum_{i=1}^m \alpha_2 \ln\text{IC}_{t-1} + \sum_{i=1}^m \alpha_3 \ln\text{UIC}_{t-1} + \sum_{i=1}^m \alpha_4 + \varepsilon_t$$

Where:

lnGRA = Economic Growth

lnIC = Direct Expenditure

lnUIC = Indirect Expenditure

α = Long-term Dynamic Coefficient

ε = Standar error

The ARDL model is a dynamic model in econometric analysis that cannot only see the long-term effects between the variables but also short-term effects. Also, it could estimate the effect of the dependent and independent variables from time to time, including the dependent variable effects on the past to the present.

4. Result and Discussion

The results of the unit root test research using the Philip Peron method of Economic Growth, direct and direct expenditures using data from 1986 to 2020 can be seen in the table below:

Table 1. Unit Root Tests of Philip Peron Model

Variables	Unit Root Tests	PP Test Statistics	Critical	Explanation
logGRA	Level I (0)	-0.593719	-2.951125	Not Stationary
	First Different I(I)	-6.133202	-2.954021	Stationary
lnIc	Level I (0)	-0.501172	-2.951125	Not Stationary
	First Different I(I)	-7.295350	-2.954021	Stationary
lnUIC	Level I(0)	-0.070412	-2.951125	Not Stationary
	First Different I (I)	-7.230488	-2.954021	Stationary

Mark***(**)* Rejected Ho and significant at 1%, 5% and 10%.

The test results of the Philip Peron method in table 1 showed that economic growth (logGRA), direct expenditure (logIC), and indirect expenditure (log UIC) occurred stationary in the first different I(I) at a significant level of 5%, which indicated that qualified to use the ARDL model.

Table 2. Optimum Lag Test Results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-108.3383	NA	0.211204	6.958641	7.096054	7.004189
1	-18.48505	157.2431	0.001354	1.905316	2.454967*	2.087510
2	-7.177909	17.66741*	0.001092*	1.761119	2.723009	2.079958*
3	3.933571	15.27829	0.001193	1.629152*	3.003279	2.084636

Source: Data analysis results

The optimum lag test results in table 2 showed that lag 1 was only based on the Schwarz Information Criterion (SC) criteria. In lag 2, there were the Likelihood Ratio (LR), Final Prediction Error (FPE) criteria, and Hannan-Quinn Information Criterion (HQ). Meanwhile, in lag 3, there were the Akaike Information Criterion (AIC) criteria, then the reaction between the three variables occurred in the next 2 (two) years. It indicated direct expenditures (IC) and indirect expenditure (UIC) affected economic growth (GRA) at lag 2. Furthermore, the cointegration test (bound test) aims to obtain a long-term equilibrium relationship in the ARDL equation. The Bound Test with the ARDL model can be seen in the following table:

Table 3. Cointegration Bound Tests

Statistics Tests	Values	K
F-Statistik	6.325812	2
Critical Value Bounds		
Significances	I (0)	I (1)
10 %	2.63	3.35
5%	3.1	3.87
2.5 %	3.55	4.38
1 %	4.13	5

Source: Data analysis results.

The results of the cointegration Bound Test in table 3 showed the f-statistical value = 6.325812, the value of I(0) Bounds at significant levels of 1%, 5%, 2.5%, and 10%. It concluded that there was cointegration in economic growth (GRA), direct expenditure (IC), and indirect expenditure (UIC) in the model tested, which showed a balance of short and long-term relationships in the three (3) variables in the study.

Table 4. Short-term Estimation Results

Variables	Coefficient	Std. Error	t-Statistics	Prob.*
C	-2.610440	0.957347	-2.726743	0.0115
lnGRA(-1)	0.300067	0.146183	2.052678	0.0507
lnIC	-0.047964	0.109149	-0.439440	0.6641
lnIC(-1)	0.379159	0.163408	2.320321	0.0288
lnIC(-2)	-0.153720	0.104286	-1.474022	0.1530
lnUIC	-0.036589	0.148262	-0.246790	0.8071
lnUIC(-1)	-0.149891	0.193315	-0.775370	0.4454
lnUIC(-2)	0.541626	0.181884	2.977863	0.0064
CointEq(-1)*	-0.699933	0.131480	-5.323498	0.0000

Mark***(**)* Rejected Ho and significant at 1%, 5% and 10%.

Table 4 showed that in the short term, economic growth lag 1 positively and significantly influenced economic growth in Aceh Province, where an increase in lag 1 of economic growth by 1% can increase economic growth by 30%. Direct expenditures (development expenditures) also positively and significantly influenced economic growth in lag 1, where the 1% increase in direct expenditures in lag 1 increases economic growth by 37.92%. Furthermore, also in the short term, indirect expenditure (personnel expenditure) in lag 2 affected economic growth by 54.1% in the direction of a positive coefficient. It is in line with the study by Joshua (2019) that government expenditure significantly and positively affected economic growth in Nigeria by 29%. Also in line with Kunwar (2019) in Nepal, wherein the short term, LNGE (government expenditure) significantly and positively influenced LNGDP, meaning that a 1% increase in GE can increase GRDP in Nepal by 27.18%. Tambunan & Jakaria (2019) found that short-term personnel expenditures significantly and positively influenced Gross Domestic Products (GDP). Capital expenditures significantly and negatively influenced GDP at lag 1, and goods expenditures significantly and positively influenced GDP, where an increase in goods expenditures can increase GDP in the same period.

The ECT/CointEq coefficient was (-0.6999) and significant at 1%. The coefficient value was negative, where the error correction value indicated a long-term relationship between the variables. It showed that the speed of adjustment from the previous year's imbalance to GRDP and the current year's balance was 69.99%.

Table 5. Long-term Estimation Results

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.729555	1.143726	-3.260882	0.0032
lnIC	0.253559	0.073840	3.433918	0.0021
lnUIC	0.507399	0.103750	4.890595	0.0032

Mark***(**)* Rejects Ho and indicates significant at 1%, 5% and 10%.

Table 5 showed the estimation result in the long term, and indicated that personnel expenditure or development expenditure significantly and positively affected economic growth, where the 1% increase in direct expenditures can increase economic growth by 25, 35%. Furthermore, indirect expenditures and recurrent expenditure also significantly and positively influenced economic growth, meaning that 1% growth in indirect expenditures can increase economic growth by 50.73%. It was contrary to the research by Kolapo et al. (2021) in Nigeria, wherein the long-term capital expenditures and recurrent (routine) expenditures significantly and negatively affected economic growth. However, the results of research by Tambunan & Jakaria (2021) showed that in the long term, indirect expenditure or personnel expenditure significantly

and positively affected economic growth, while direct expenditure or capital expenditure (development) had a significant and negative effect on economic growth.

5. Conclusion

In the short term, the increase in economic growth in Aceh Province depends on the movement of economic growth in the previous period. Direct expenditures or development expenditures can increase economic growth, where development expenditures can expand business on productive economic activities supported by improvements in facilities and infrastructure built previously. However, indirect (routine) expenditures that stimulate economic growth moves slowly because the consumption of government employees to various community business activities in Aceh province was only 60%, and the rest of the government employees shop outside the region.

In the long term, both direct or development expenditures and indirect (routine) expenditures simultaneously increased economic development in Aceh Province. In fact, the government expenditures have not been able to fully stimulate the economic welfare of the community due to the continuous flight of funds/consumption expenditures and investment throughout the analysis years. Besides, there is no blueprint for distributing development expenditure for the long term, so that the distribution is not entirely appropriate to stimulate profitable economic sectors.

References

- Al-Shatti, A. S. (2014). The Impact of Public Expenditures on Economic Growth in Jordan. *International Journal of Economics and Finance*, 6(10), 157–167. <https://doi.org/10.5539/ijef.v6n10p157>
- Alshahrani, S. A., Alsadiq, A. J., Alshahrani, S., & Alsadiq, A. (2014). Economic Growth and Government Spending in Saudi Arabia: an Empirical Investigation. *IMF Working Paper*, Fiscal Affairs Department.
- Amri, K. (2020). Kebijakan fiscal dan pertumbuhan ekonomi daerah: Bukti data panel di Indonesia. *Al-Masharif: Jurnal Ilmu Ekonomi dan Keislaman* 8 (1), 1-18.
- Amri, K., & Aimon, H. (2017). Pengaruh pembentukan modal dan ekspor terhadap pertumbuhan ekonomi Indonesia. *Economac: Jurnal Ilmiah Ilmu Ekonomi*, 1 (1), 1-16.
- Arpaia, A & Turrini, A (2008), Government expenditure and economic growth in the EU: long-run tendencies and short-term adjustment, *Economic Papers* 300, Belgium: European Commission Directorate-General for Economic and Financial Affairs.

- Beckmann, J., Endrich, M., & Schweickert, R. (2014). Government Activity and Economic Growth – One Size Fits All? *Kiel Institute for the World Economy, 24100 Kiel, Germany*, 1–27.
- Chipaumire, G., Ngirande, H., Method, M., & Ruswa, Y. (2014). The impact of government spending on economic growth: Case South Africa. *Mediterranean Journal of Social Sciences*, 5(1), 109–118. <https://doi.org/10.5901/mjss.2014.v5n1p109>
- Chude, NP & Chude, DI (2013), Impact of Government Expenditure on Economic growth in Nigeria, *International Journal of Business and Management Review*, 1(4), 64-71.
- Chor, F. T., & Md. Darit, S. (2015). Penentu Makroekonomi Kadar Jenayah di Malaysia. *Jurnal Ekonomi Malaysia*, 49(2), 53–60. <https://doi.org/10.17576/jem-2015-4902-05>
- Ebong, F., Ogwumike, F., Udongwo, U., & Ayodele, O. (2016). Impact of Government Expenditure on Economic Growth in Nigeria: A Disaggregated Analysis. *Asian Journal of Economics and Empirical Research*, 3(1), 113–121. <https://doi.org/10.20448/journal.501/2016.3.1/501.1.113.121>
- Froyen, R. T. (2008). *Macroeconomics: Theories and Policies* (6th ed.). Prentice Hall, Upper Saddle River.
- Gujarati, D., & Porter, D. (2009). *Dasar Dasar Ekonometrika* (5th ed.). Salemba Empat.
- International Journal of Economics and Finance*, Vol. 6, No. 10.
- Huang, C. (2006). Government Expenditures in China and Taiwan: Do They Follow Wagner's Law? *Journal of Economic Development*, 31(2), 139–148.
- Jiranyakul, K. (2007). The Relation between Government Expenditures and Economic Growth in Thailand. *Munich Personal RePEc Archive*, 1–7. <https://doi.org/10.2139/ssrn.2260035>.
- Jiranyakul, K & Brahmasrene, T. (2007). The Relationship between Government Expenditures and Economic Growth in Thailand, *Journal of Economics and Economic Education Research*, 8(1), 93-102.
- Joshua, U. (2019). An ARDL Approach to the Government Expenditure and Economic Growth Nexus in Nigeria. *Academic Journal of Economic Studies*, 5(3), 152–160.

- Ju-Huang, C. (2006). Government expenditures in China and Taiwan: Do they follow Wagner's law? *Journal of Economic Development*, 31(2), 139-148.
- Kolapo, F., Bolanle, A., Mokuolu, J., Oluwaleye, T., & Alabi, K. (2021). Impact of Government Expenditure on Economic Growth In Sub-Saharan Africa: A Validity of Wagner's Law. *International Journal of Scientific Research and Management*, 9(02), 2039–2150. <https://doi.org/10.18535/ijssrm/v9i2.em01>
- 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. <https://doi.org/10.3126/craiaj.v3i1.27488>.
- Kusuma, Hendra (2016). *Desentralisasi Fiskal dan Pertumbuhan Ekonomi di Indonesia*. *Jurnal Ekonomi Kuantitatif Terapan*, 3(1), 221-232.
- Martin, Erlina. (2009). Analisis Hubungan Kausalitas antara Pengeluaran Pemerintah dan Pertumbuhan Ekonomi di Indonesia. FE USU, Medan.
- Loizides, J., & Vamvoukas, G. (2005). Government Expenditure and Economic Growth: Evidence from Trivariate Causality Testing. *Journal of Applied Economics*, 8(1), 125–152. <https://doi.org/10.1080/15140326.2005.12040621>.
- Loto, M.A., (2011). Impact of government sectoral expenditure in economic growth. *Journal. Economic and International Finance*, 3(11): 646 –652.
- Maipita, I. (2020). Simulasi Pengeluaran Pemerintah Dan Dampaknya Terhadap Kinerja Ekonomi Makro: Suatu Model Computable General Equilibrium. *Quantitative Economics Journal*, 1(2), 1–15. <https://doi.org/10.24114/qej.v1i2.17403>
- Mudaki, J., & Masaviru, W. (2012). Does the Composition of Government Expenditure Matter for Economic Growth? *Journal of Economics and Sustainable Development*, 3(3), 60–71.
- Muliadi., & Amri, K. (2019). Infrastruktur jalan, belanja modal dan kesempatan kerja: Bukti data panel kabupaten kota di Aceh. *Jurnal Manajemen dan Sains* 4 (2), 334-341
- Nazamuddin, B. S., & Amri, K. (2020). Does goods and services spendings reduce income inequality? A panel data evidence from Indonesia. *Regional Science Inquiry*, 12(1), 87-102.

- Nurudeen, A., & Usman, A. (2010). Government Expenditure And Economic Growth In Nigeria, 1970-2008: A Disaggregated Analysis. *Business and Economics Journal*, 1(1), 1–11.
- Omoke, P. C. (2009). Government expenditure and National Income: A Causality Test for Nigeria. *European Journal of Economic and and Political Studies*, 2 (2), 1-11.
- Paparas, D., Richter, C., & Paparas, A. (2015). Fiscal Policy and Economic Growth, Empirical Evidence in European Union. *Turkish Economic Review*, 2(4), 239–268.
- Peltzman, S. (2016). State and local fiscal policy and growth at the border. *Journal of Urban Economics*, 95, 1–15. <https://doi.org/10.1016/j.jue.2016.06.003>.
- Pesaran & Shin (2001), Bound Testing Approach to The Analysis of Level Relationship. *Political Studies*, 2 (2), 1-11.
- Pemerintah Negara Republik Indonesia (2004), Undang-Undang Nomor 33 tahun 2004. Tentang Perimbangan Keuangan Antara Pemerintah Pusat dan Pemerintahan Daerah.
- Pemerintah Negara Republik Indonesia (2006), Undang-Undang Nomor 11 Tahun 2006. Tentang Pemerintahan Aceh.
- Ram, R.,(2006). Growth elasticity of poverty: Alternative estimates and a note of caution. *Kyklos*, 59(4): 601 – 610.
- Romero-Ávila, D., & Strauch, R. (2008). Public finances and long-term growth in Europe: Evidence from a panel data analysis. *European Journal of Political Economy*, 24(1), 172–191. <https://doi.org/10.1016/j.ejpoleco.2007.06.008>
- Rosen, H.S. (2014). *Public Finance*, Tenth Edition, Global Edition, the McGraw-Hill Series.
- Sukirno, S. (2013). *Pengantar Teori Makroekonomi*. Jakarta: PT. Raja Garfindo Persada.
- Tambunan., C & Jakaria (2021), Dampak Belanja Negara terhadap Tingkat Kegiatan Ekonomi di Indonesia, *Media Ekonomi*, 27(1), 221-233.
- Todaro, M.P., (1994). *Economic development in the third world*. London: Longmans Inc
- Todaro, Michael P. (2010). *Pembangunan Ekonomi di Negara Berkembang*. Jakarta: Penerbit Erlangga.

- Usman, A., H.I. Mobolaji, A.A. Kilishi, M.A. Yaru and T.A. Yakubu, (2011). Public expenditure and economic growth in Nigeria. *Asian Economic and Financial Review*, 1(3): 104-113.
- Wagner, A., (1911). *Three extracts on public finance*. Musgrave, R. A. and Peacock, A. T. Eds. *Classics in the Theory of Public Finance*. London: Macmillan.
- Widodo, A., Waridin, & K., M. J. (2011). Analisis Pengaruh Pengeluaran Pemerintah di Sektor Pendidikan dan Kesehatan terhadap Pengentasan Kemiskinan melalui Peningkatan Pembangunan Manusia di Provinsi Jawa Tengah. *Jurnal Dinamika Ekonomi Pembangunan*, 1(1), 25–42.
- Zulfan, T., & Maulana, H. (2019). Gejala fly paper effect di provinsi Aceh ditinjau dari dana alokasi umum dan dana otonomi khusus, *INOVASI*, 15 (2), 188-192.