THE OPTIMAL PUBLIC EXPENDITURE DECISION: A CASE OF ECONOMIC GROWTH IN SOUTHEAST ASIAN COUNTRIES

My-Linh, Nguyen Thi, University of Finance-Marketing (UFM)
Nga, Phan Thi Hang, University of Finance-Marketing (UFM)
Tam Thanh Phan, Lac Hong University (LHU)

ABSTRACT

Government public expenditure has always played an important role in economic growth. However, there are many different opinions about the optimal public expenditure impact on growth. The public expenditure suggests that government spending programs help to provide important public goods such as infrastructure and education. The study objective focuses on testing the impact of government expenditure on economic growth in 10 Southeast Asian countries (ASEAN). The second data collected from 2000 to 2016 and obtained from the World Bank (WB) and the International Monetary Fund (IMF). The study applied quantitative method with panel data regression, namely the Generalized Method of Moment (GMM) to avoid the autocorrelation among errors, heteroscedasticity and potential endogenous problems. Research results showed that government expenditure has a nonlinear impact on economic growth in the selected countries. Particularly, the optimal level of government expenditure based on economic growth in ASEAN countries is 21.05% GDP with significance level 0.05. Finally, the researchers have some recommendations for the governments of ASEAN countries in order to maintain a reasonable level of government expenditure on economic growth.

Keywords: Optimal Government Expenditure, Economics, Gdp, Growth, ASEAN.

INTRODUCTION

Public expenditure means spending tax contributions of people and enterprises. Therefore, the point of direction and requirement of the National Assembly, the Government and the Prime Minister is to ensure strict, economical and efficient. Besides, it is the best support for implementing socio-economic development objectives; aim to improve the material and spiritual life of the people and develop the country.

In the current context, there are two major problems in budget spending such as discipline and efficiency in budget spending. The second issue is budget restructuring to ensure the sustainability of the national finance. In terms of discipline and efficiency in budget spending, there are still certain shortcomings for the status of approving programs and projects without source balance; scattered distribution. Disbursement does not meet the plan, the number of large and long-term transfer sources the costs are high; the separation of investment and regular expenditures is difficult to ensure the economic-technical norms, the reduction of efficiency and the life of the investment projects. This showed low public investment efficiency. In general, economic theories do not clearly indicate the impact of government spending on economic growth, but most economists believe that increasing the size of government spending

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can boost economic growth. However, in some cases, reduction in government spending will have a positive impact on the economy. Keynes and Keynesian economists state that expansion of government spending boots economic growth through the economy's aggregate demand. However, it is warned that government spending should not exceed 25% of GDP because increasing the size of government spending will adversely affect economic growth; conversely, there are views that cutting government spending reduces the budget deficit, thus lowering interest rates, increasing investment and is the driving force for economic growth.

The decline in economic growth on the Rahn curve is clarified as follows: (1) when the size of government spending rises beyond the tolerance of the economy, funding from tax increases or borrowing is required, which reduces savings, decreasing private investment, increasing interest rates; (2) government spending will encroach on the private sector, reducing the competitiveness of the private sector, while the decisions on government spending are dominated by political forces and often less efficient than the private sector; (3) several programs of government spending discourage production increase, such as unemployment insurance lessening the motivation for finding a job, pensions or educational subsidies discouraging savings. These will lead to negative consequences for economic growth.

Based on the above mentioned things, the researchers continued doing empirical research on ASEAN countries in order to look for new empirical evidence of the impact of public expenditure on economic growth in the selected countries. The paper used quantitative approach with panel data regression for 10 ASEAN countries over the period 2000-2016 so as to test the direction of the relationship between government expenditure and economic growth. The second data collected from the World Bank and the International Monetary Fund. Finally, this study helps Government expenditure on economic growth in ASEAN countries.

LITERATURE REVIEW

The issue of public spending is very important for the economic development of a nation. Reasonable spending will bring about economic growth for that nation; whereas, unreasonable spending restrains economic development, even causing financial exhaustion and insolvency for that nation. Therefore, many authors have studied the impact of public spending on economic growth, specifically.

Okoro (2013) studied the impact of government spending on economic growth during the period 1980-2011. The result showed that the effect of government spending on economic growth is also in the same direction. With the result similar to that of Okoro (2013), Asghar et al. (2011), when studying the data of Pakistan from 1974 to 2008, proposed that government spending impacts on economic growth in the same direction.

Yasin (2003) studied the data of Sub-Saharan African countries during the period 1987-1997. The research result showed that government spending, trade openness and household spending impact on economic growth in the same direction.

Mushtaq et al. (2014) used the data of eight countries during the period 1995-2011 and assumed that government spending impacts on economic growth in the same direction. In addition, the research result also showed that export turnover and domestic private investment impact on economic growth in the same direction; whereas, import turnover impacts on economic growth in the opposite direction.

Rana et al. (2014) investigated the impact of government size on economic growth in selected economies of the MENA countries by using a nonlinear panel data approach over the period 1990-2011. The main result of this study confirmed the negative impact of consumption

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expenditures on economic growth in this block of countries. The result also shows that the optimal threshold of real government consumption spending is estimated at 7.96% of GDP.

Ainabor et al. (2014) concluded that asset accumulation has an impact on economic growth; besides, the effect of household expenditure on economic growth is the result of empirical research by Ainabor et al. (2014); in addition to asset accumulation ratio and household spending, trade openness is also important for economic growth.

Stylianos et al. (2015) studied the optimal threshold of public spending to ensure the economic growth of developed and developing countries by using the data on 129 countries from the World Development Indicators (WDI) based on the report of the World Bank. Variables are used as follows: the growth rate of GDP as dependent variable; explanatory variables including: the general consumption expenditure of government; the percentage change of CPI; the share of investment; the openness of the economy; and population growth. The authors performed a dynamic panel threshold estimation to estimate the optimal level of government spending for economic growth. The GMM model is used to analyze the data and the results of the study: the optimal level of government spending is 18.04 percent. In addition to the estimation of the optimal level of government spending, the study identified the non-linear effects of the optimal level of government spending on economic growth when it is above and below that level. Specifically: when the government size of the average country is below the threshold, a 1% increase in government spending will increase economic growth by 0.99%. However, if the average country is above the estimated threshold, then a 1% increase in government size will decrease growth by 0.65%. As a result, the impact of government spending on growth is larger when it is below the estimated threshold.

Rana & Hasan (2016) studied and determined the optimal threshold of public spending to GDP of 30 OECD-NEA countries over the period of 1990-2011. The authors applied the nonlinear theory of government spending and economic growth that Rana & Hasan (2016) presented when implementing the Laffer curve. The study used the Panel Smooth Transition Regression (PSTR) model in the form of Cobb-Douglas equation function as it is applied in Dar and Amir (2002). The results of the study estimated that the optimal threshold of government spending is 28.27% to Gross Domestic Product (GDP) for the selected countries. The results show that the impact of government spending on economic growth is positive when the level of spending below the threshold is determined and the government spending above the threshold will suppress economic growth in the selected countries.

Pelin & Taner (2017) studied and defined the optimal threshold of public spending to GDP in Turkey from 1998 to 2015 with the dependent variable of GDP growth rate and independent variables including: Government consumption expenditure (% of GDP); Government investment (% of GDP); Total government expenditure (% of GDP). The study employs the model of Pelin & Taner (2017) to analyze three different thresholds for variables including government spending, government investment and total government spending. Research results showed that the optimal spending threshold is 12.6% of GDP. If government spending is less than or equal to 12.6%, government spending has a positive impact on economic growth. On the contrary, if government spending exceeds 12.6%, it will have a negative impact on economic growth.

Xavier (2017) examined the reasons for the low economic growth of Jamaica over the past twenty years and whether this is due to inappropriate public spending or not. The author uses the nonlinear regression model as well as the error correction model to determine the optimal level of government spending that maximizes economic growth for the country. The

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study utilizes quarterly data from 1993 to 2016. The results showed that the optimal level of government spending that maximizes economic growth for Jamaica is 33.2% of total output.

Umeh et al. (2018) studied the concluded that there is positive impact of sectoral spreads of government expenditure on economic performance in Nigeria. Three variables on sectoral Government expenditure among five sectoral Government expenditure variables have long-run relationship with real GDP. This study's conclusion confirmed Wagner's law that increases in economic growth was achieved as a result of increase in Government expenditure.

Dan et al. (2018) showed that the study tests the importance of various categories of public expenditure, the functional structure and growth in the Gross Domestic Product (GDP), using an Autoregressive-Distributed Lag (ARDL) model. We document and study the correlation between real GDP growth and 10 different categories of public expenditure, according to their functional classification, using quarterly data for the period 1995-2015, for 10 selected Central and Eastern European countries that joined the European Union. The results of our study, like most recent literature, show that expenditures on education and health care have a positive impact on the economy, while expenditures on defense, economic affairs, general public services and social welfare have a negative impact.

From the above studies, the authors synthesized the results of the studies over the period 1998-2017 through the data in the following table.

Table 1
THE PREVIOUS STUDIES SYNTHESIZED

Authors	Analyzed Data	Selected Countries	Government Spending Level of GDP (%)
Ferris (2013)	1890-2012	New Zealand	30.0
Rana et al. (2014)	1990-2011	MENA countries	7.96
Shumaila & Abdul (2014)	1973-2012	Pakistan	17
Stylianos & Yiannis (2015)	1980–2009	129 countries	18.04
Rana & Hasan (2016)	1990-2011	30 OECD-NEA countries	28.27
Pelin &Taner (2017)	1998-2015	Turkey	12.6
Xavier (2017)	1993-2016	Jamaica	33.2

Source: The previous studies synthesized by the authors.

Table 1 showed that Government spending level of GDP (%) is from 7.96% to 33.2%. The second data surveyed from 1890-2012; 1990-2011; 1973-2012; 1980-2009; 1990-2011; 1998-2015 and 1993-2016.

RESEARCH METHOD

Method and Data

The study uses quantitative approach with panel data through the technique of multivariate linear regression analysis to quantify the impact of independent variables on dependent variables in the model. First, regression is studied in three common methods based on the panel data: regression by the method of Pooled Ordinary Least Squares (Pooled OLS), regression by the Fixed Effects Model (FEM) and regression by the Random Effects Model

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(REM). In order to select the most suitable regression method among the above three methods, the tests are used: F-test, Breusch and Lagrange Multiplier test (Doytch & Uctum, 2011). F-test is used to select between Pooled OLS model and FEM model. LM test is used to select between POLS and REM. Hausman test is used to select between FEM model and REM model.

Next, the study conducts the test for autocorrelation and heteroscedasticity. Then, the study employs the Generalized Method of Moment (GMM) to solve potential endogenous problems, autocorrelation among errors and heteroscedasticity (Doytch & Uctum, 2011). According to regression by GMM is better than common panel data regression methods in examining the movement of financial variables. In this section, the authors use Sargan test to determine the appropriateness of instrumental variables in the GMM estimation. Sargan test with the hypothesis H_0: the instrumental variable is exogenous, which means the instrumental variable is not correlated with the error of the model. In order to test autocorrelation, the paper uses Arellano-Bond test with the hypothesis *H_0: there is no autocorrelation*.

Research data

The paper uses the second data obtained from the World Bank (WB) and the International Monetary Fund (IMF) in 10 Southeast Asian countries (ASEAN) including: Vietnam, Thailand, the Philippines, Indonesia, Malaysia, Myanmar, Laos, Cambodia, Brunei and Singapore over the period 2000-2016. After the data were collected, the authors implemented the next step of calculating the variables based on the obtained data to conduct tests and regression analysis.

Research model

Based on the results of the empirical studies presented in Section 2, the authors develop a research model with the dependent variable as economic growth rate (GDP) and the explanatory variable in the model as government spending. In order to control the impact of some other variables on economic growth, the authors add variables such as asset accumulation ratio, household spending and trade openness to the research model. In addition, the authors add the independent variable of government spending square to test the nonlinear impact of government spending on economic growth. The addition of the independent variable of government spending square is based on the Rahn curve theory, which was introduced by the research model is expected to have the equation as follows:

$$GDP_{it}=\beta_0+\beta_1 GOV_{it}+\beta_2 GOV^2_{it}+\beta_3 ASSET_{it}+\beta_4 FAM_{it}+\beta_5 OPEN_{it}+\varepsilon_{it}$$

Where,

i: country with the ordinal number i (i=1-5); t: year (from 2000 to 2016)

Table 2
SYMBOLS OF VARIABLE CODE, VARIABLE NAME, VARIABLE MEASUREMENT AND PRIOR STUDIES RELATED TO THE VARIABLES IN THE MODEL

Variable Code	Variable Name	Variable Measurement	Previous Studies
GDP_{it}	Economic growth	Annual economic growth rate	
Independent Variable			

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Table 2
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GOV_{it}	Government spending	Ratio of government spending to GDP (% of GDP)	Asghar et al. (2011); Ighodaro & Oriakhi (2010); Mushtaq et al. (2014); Nurudeen & Usman (2010); Okoro (2013); Yasin (2003); Stylianos et al. (2015); Rana & Hasan (2016); Pelin & Taner (2017); Xavier (2017).
GOV^2_{it}	Government spending square	(Ratio of government spending to GDP)^2	Rahn curve theory.
Control Variable			
$ASSET_{it}$	Asset accumulation ratio	Annual asset accumulation ratio to GDP (% of GDP) =investments in gross fixed assets of the economy[1] (government and private)+net change in inventory value[2]	Mushtaq et al. (2014); Florin-Marius (2008); Stylianos et al. (2015).
FAM_{it}	Household spending	Annual growth rate of household spending (% of GDP)	Yasin (2003); OECD (2009); Guisan (2004); Rana & Hasan (2016); Pelin & Taner (2017); Xavier (2017).
$OPEN_{it}$	Trade openness	Annual growth rate of total exports and imports of goods and services (%)	Mushtaq et al. (2014); Yasin (2003); Stylianos et al. (2015); Rana & Hasan (2016); Pelin et al. (2017); Xavier (2017).

(Source: The author's collecting)

RESEARCH RESULTS

Descriptive Statistics

The research data are collected from the World Bank and the International Monetary Fund for 10 ASEAN countries in the period 2000-2016 with the variables described in Table 3 as follows.

Table 3
DESCRIPTIVE STATISTICS OF VARIABLES

Variable	Observations	Minimum	Mean	Maximum	Standard Deviation (Std. Dev.)
GDP_{it}	170	-2. 525	5.755	15.240	3.336
GOV_{it}	170	12.183	21.874	41.426	6.135
$ASSET_{it}$	170	-31.161	8.933	67.389	14.8734
FAM_{it}	170	-6.988	5.658	20.327	3.958
$OPEN_{it}$	170	-37.569	75.290	11.891,03	911.663

(Source: The authors' results of analysis)

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Table 3 showed that Malaysia experienced the lowest GDP growth among the selected countries in 2009 and Singapore achieved the highest GDP growth in 2010. The government spending of Myanmar was the lowest in 2008, while the government spending of Brunei was the highest in 2002. The lowest asset accumulation rate was in Brunei in 2014 and the highest in Indonesia in 2009. Brunei was the country with the lowest level of household spending in 2000; conversely, Laos had the highest level of household spending in 2000. Myanmar was the country with the greatest decrease in trade openness in 2002 and the highest increase in 2012.

Regression Result

The study applies the panel data regression models, including: linear regression by the method of Pooled Ordinary Least Squares (Pooled Regression-Pooled OLS), the fixed effects model (FEM) and the Random Effects Model (REM). The research result shows that the Fixed Effects Model (FEM) proves to be more suitable due to the fact that test F (9,54)=8.03 is statistically significant at the 1% significance level and Hausman test $chi^2(5)<0$. However, the research model has autocorrelation among errors and heteroscedasticity; these problems can be controlled by the Generalized Method of Moment (GMM) in order to ensure that the obtained estimates are viable and effective. Moreover, this method solves potential endogenous problems (Doytch & Uctum, 2011). The result of the research models is below.

Table 4
RESULT OF HETEROSCEDASTICITY AND AUTOCORRELATION

Heteroscedasticity test	Autocorrelation test
White's test	Wooldridge test
$chi^2(19)=31.29$ $Prob>chi2=0.037^{**}$	$F(1, 9)=12.328$ $Prob>F=0.006^{***}$

Source: The author's results of analysis.
Note: *** and ** are significant at the 1% and 5% level respectively.

Table 4 showed that White's test suggests the model that has heteroscedasticity at the 5% significance level. Wooldridge test shows that the model has autocorrelation among errors at the 1% significance level.

Table 5
THE RESULT OF THE RESEARCH MODEL

GDP_{it}	Regression Coefficient			
	Pooled OLS	**FEM**	**REM**	**GMM**
GOV_{it}	-0.411^{**}	-0.759^{***}	-0.579^{***}	2.048^{**}
GOV^2_{it}	0.004	0.012^{***}	0.007^{*}	-0.048^{***}
$ASSET_{it}$	0.056^{***}	0.042^{***}	0.049^{***}	0.030^{*}
FAM_{it}	0.345^{***}	0.233^{***}	0.292^{***}	0.359^{***}
$OPEN_{it}$	0.000	0.000	0.000	0.000^{***}

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Table 5
THE RESULT OF THE RESEARCH MODEL

Constant	10.188***	14.167***	12.388***	-16.179*
Significance level	F(5.163)=36.88 Prob>F=0.000***	F(5.154)=15.38 Prob>F=0.000***	Wald chi2(5)=132.09 Prob>chi2=0.000***	Wald chi2(4)=185.58 Prob chi2=0.000***
R^2	53.08%	49.20%	52.54%	
Arellano-Bond AR(2) test				Pr>z=0.178
Sargan test				Prob>chi^2=0.891
Number of instruments				9
Number of groups				10

Source: The author's results of analysis.
Note: ***, **and * are significant at the 1%, 5% and 10% level respectively.

Table 5 showed that the dependent variable of economic growth (GDP_{it}), after using the GMM method to solve potential endogenous problems, autocorrelation among errors and heteroscedasticity, the research results are as follows: (1) The Hansen test results of the above models confirm that the instruments can be considered to be valid because they accept the H_0 hypothesis (H_0: instrumental variables are not correlated with the error of the model). The Arellano-Bond test shows that the acceptance of the hypothesis *H_0: means the good model because there is no autocorrelation among errors*. In addition, the model with the smaller number of instruments (9) than the number of groups (10) ensures viability. (2) The independent variable of government spending (GOV_{it}) impacts on economic growth (GDP_{it}) in the same direction at the 5% significance level and governmental spending square (GOV^2_{it}) impacts on economic growth (GDP_{it}) in the opposite direction at the 1% significance level. This reflects that there is a nonlinear impact of government spending on economic growth. With the independent variable of government spending (GOV_{it}), this finding is consistent with studies by Asghar et al. (2011), Ighodaro & Oriakhi (2010), Mushtaq et al. (2014), Nurudeen & Usman (2010), Okoro (2013), Yasin (2003), Stylianos Asimakopoulos et al. (2015); Rana & Hasan (2016) and Pelin & Taner (2017g). The variable of government spending square (GOV^2_{it}) impacts on economic growth (GDP_{it}) in the opposite direction and is statistically significant for economic growth (GDP_{it}), which reflects the novelty of the study. This means that an increase in government spending can boost economic growth; however, government spending that exceeds the optimal threshold will have a negative impact on economic growth. In addition, the authors find that economic growth (GDP_{it}) is impacted in the same direction by the control variable of asset accumulation ratio ($ASSET_{it}$) at the 10% significance level, in the same direction by the control variable of household spending (FAM_{it}) and trade openness ($OPEN_{it}$) at the 1% significance level. This suggests that an increase in asset accumulation ratio, household spending and trade openness could enhance economic growth.

The result of the research model has the equation as follows:

$$GDP_{it}= -16.179+2.048GOV_{it}-0.048GOV^2_{it}+0.030ASSET_{it}+0.359FAM_{it}+0.000OPEN_{it}+\varepsilon_{it}$$

With this result, the authors examine the function for the above quadratic equation under GOV and get the optimal size of government spending at 21.05% of GDP. Accordingly, the authors recommend that the threshold of government spending is 21.05% of GDP.

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DISCUSSION & CONCLUSION

The study focuses on testing the impact of government spending on economic growth in 10 Southeast Asian countries (ASEAN) including: Vietnam, Thailand, the Philippines, Indonesia, Malaysia, Myanmar, Laos, Cambodia, Brunei and Singapore. The authors employ the Generalized Method of Moment (GMM) to solve potential endogenous problems, autocorrelation among errors and heteroscedasticity in order to ensure that the obtained estimates are viable and effective. The research result shows that economic growth (GDP_{it}) is impacted in the same direction by government spending (GOV_{it}). Meanwhile, government spending square (GOV^2_{it}) impacts on economic growth (GDP_{it}) in the opposite direction. Additionally, the authors also find the impact of asset accumulation ratio ($ASSET_{it}$), household spending (FAM_{it}) and trade openness ($OPEN_{it}$) on economic growth (GDP_{it}). With this finding, the authors recommend that the optimal threshold of government spending is 21.05% of GDP. This is also the basis for the authors to make recommendations to the governments of ASEAN countries to maintain a reasonable level of government spending on economic growth.

According to IMF statistics in the study period, the countries with the average government spending above the optimal threshold include Brunei (33.5%), Vietnam (27.6%), Malaysia (27%) and Laos (22%); the countries with the average government spending below the optimal threshold are Myanmar (16.2%), Singapore (16.5%), Cambodia (17.4%), Indonesia (17.9%) and the Philippines (19.6%); only the government spending of Thailand is approximately the optimal level with an average spending rate of 21%. Thus, theoretically, Brunei, Vietnam, Malaysia and Laos should reduce government spending in the future to reach the optimal threshold for economic growth; conversely, Myanmar, Singapore, Cambodia, Indonesia and the Philippines need to increase government spending in the coming time to reach the optimal threshold for economic growth.

As a result of this study, the researchers have more empirical evidence to support policies on decreases in government spending in the countries with government spending above the optimal threshold and increases in government spending in the countries with government spending below the optimal threshold. Besides, strict management of state budget spending improved in order to strengthen inspection, supervision, auditing, inspection and control of state budget spending to ensure proper spending for the regime, standards and norms. Governement continues improving strictly handle violations of budget financial management and state property management; to fully recover into the state budget for spending amounts in contravention of the prescribed regime, criteria.

Moreover, some recommendations are proposed as follows.

MANAGERIAL IMPLICATIONS

Managerial implications for countries with the spending size above the threshold of 21.5% (Brunei (33.5%), Vietnam (27.6%), and Malaysia (27%), the governments need to take measures in the short term and solutions in the long term to reduce government spending to the appropriate threshold. Specifically, these countries need to revise their spending as follows: (1) restrict spreading public investment, reform and improve the efficiency of public investment, avoid losses and waste. (2) Ensure transparency in government spending, control strictly the spending of government and ministries in order to reduce the burden on the budget. (3) Increase the expenditures which have a greater positive impact on economic growth such as transportation, education and training; simultaneously, reduce spending and instead spending on

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development investment, but examine the socio-economic goals that the government is pursuing to select the appropriate spending structure in each period.

Managerial implications for countries such as Cambodia (17.4%), Indonesia (17.9%) with the spending size lower than the threshold of 21.5%, the governments should consider increasing government spending on necessary activities such as: (1) Increase spending on infrastructure. (2) Increased spending on technology investment. (3) Select the appropriate investment portfolio to stimulate economic growth. (4) Depending on the government's goals in the economic stage, choose the level of government spending to optimize economic growth.

Finally, managerial implications for localities with low governance, the impact of public expenditure on economic growth is also low. In other words, the quality of public administration plays a key role in directing public and private sector resources to economic growth. From the results of this study, researchers said that local authorities should focus on improving the quality of public administration to improve economic growth for all of provinces in Vietnam.

Despite the highlighted contributions of this study, some limitations have to be taken into research results, thereby serving as proposals for future research. First of all, the second data is tested and updated with the years of 2017, 2018 and 2019. So, the level of representativeness of the sample can be affected. Secondly, despite the high explanatory power of the model, it could be reinforced by adding control variables, such as economic policy, investment environment, public service quality. Finally, these results should compare with the results of the previous studies in other countries.

ENDNOTE

1. Additional investments in fixed assets such as investments in land reclamation; investments in factories, machinery, schools, hospitals, private houses, commercial and industrial buildings.
2. Inventories are the enterprise's goods which are reserved for the business activities of the enterprise.

REFERENCES

Ainabor, A.E., Shuaib I.M., & Kadiri, A.K. (2014). Impact of capital formation on the growth of Nigerian economy 1960-2010: Vector error correction model (VECM*). School of Business Studies, Readings in Management and Social Studies, 1*(1), 132-154

Asghar, N., Azim, P., & Rehman, H. (2011). Impact of government spending in social sectors on economic growth: A case study of Pakistan. *Journal of Business & Economics*, *3*(2), 214-234.

Dan, L. (2018). The impact of public expenditures on economic growth: A case study of central and eastern european countries. *Emerging Markets Finance and Trade, 54*(3), 552-570.

Doytch, N., & Uctum, M (2011). Does the worldwide shift of FDI from manufacturing to services accelerate economic growth? A GMM estimation study. *Journal of International Money and Finance, 30*(3), 410-427.

Ferris, J. (2013). *Government size, government debt and economic performance with particular application to New Zealand*. In Social Science Research Network.

Florin-Marius, P. (2008). *Interdependences between gross capital formation, economic growth and external equilibrium in the context of the European Union enlargement in Romanian Economic Journal.* Revista Română de Economie.

Ighodaro, C., & Oriakhi, D. (2010). Does the relationship between government expenditure and economic growth follow Wagner's law in Nigeria? *Annals of the University of Petroşani, Economics, 10*(2), 185-198.

Mushtaq, M., Nazir, R., & Bashir, I. (2014). Panel cointegration analysis of government spending, exports, imports and economic growth. *International Review of Research in Emerging Markets and the Global Economy, 1*(2), 125-132.

Nurudeen, A., & Usman, A. (2010). Government expenditure and economic growth in Nigeria: A disaggregated analysis. *Business and Economics Journal, 5*(3), 154-201.

Citation Information: Linh, N.T.M., Nga, P.T.H., & Phan, T.T. (2019). The optimal public expenditure decision: a case of economic growth in southeast asian countries. *Journal of Management Information and Decision Sciences, 22*(2), 25-35

Okoro, S. (2013). Government spending and economic growth in Nigeria (1980-2011*). Global Journal of Management and Business Research Economics and Commerce*, *13*(5), 224-254.

Pelin, V.I., & Taner, T. (2017). Government size and economic growth in Turkey: A threshold regression analysis. *Prague Economic Papers*, *26*(2), 142–154.

Rana, A., & Hasan, H. (2016). An investigation of the impact of size of the government on economic growth: some new evidence from oecd-nea countries. *Iran. Economy*, *20*(1), 51-67.

Rana, A., Hassan, H.S., & Jamaledin, M.Z. (2014). An investigation of the impact of government size on economic growth: New evidence from selected mena countries. *Iranian Journal of Economic Studies*, *3*(2), 63-80.

Shumaila, Z., & Abdul, Q. (2014). *An analysis of optimal government size for growth: A case study of Pakistan*. Mpra paper No. 58989, posted 30. September 2014 08:49 UTC.

Stylianos, A., & Yiannis, K. (2015). *The impact of government size on economic growth: A threshold analysis.* The university of nottingham, granger centre discussion.

Umeh, A.C. (2018). Sectoral spreads of government expenditures and economic growth in Nigeria (1980-2017): An approach of error correction model. *International Journal of Academic Research Economics and Management Sciences*, *7*(4), 180-195.

Xavier, M. (2017). *Investigating the optimal level of government spending to maximize economic growth in Jamaica*. The views expressed in this paper are not necessarily those of the Bank of Jamaica.

Yasin, M. (2013). *Public spending and economic growth: Empirical investigation of sub-saharan.* Africa, Morehead State University, Southwestern Economic Review.

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