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横浜国立大学

氏　　名	TRAN THI PHUONG
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論文審査委員	主査　横浜国立大学　植村 博恭　教授 横浜国立大学　シュレスタ、ナゲンドラ　准教授 横浜国立大学　西川　輝　准教授 横浜国立大学　山崎 圭一　教授 横浜国立大学　伊集 守直　教授

論文の要旨

CHAPTER I　INTRODUCTION

The dissertation is targeted to answer the following questions: (1) Are the impact of external public debt and that of domestic public debt on economic growth the same or different? (2) Does the effect of public debt depend on public debt structures which are reflected by the share of domestic and external public debt in GDP? (3) How are the impacts of public debt on economic growth different in the groups of countries with different income levels and different institutional arrangements and economic conditions?

The objectives of the dissertation include the followings: (a) to provide a better understanding of the relationship between public debt and economic growth from both theoretical and empirical perspectives by conducting a comprehensive literature survey of existing researches on the impact of public debt on economic growth ; (b) to investigate economic structures and public debt structures in each ASEAN country in order to understand the diversity of economic growth patterns in ASEAN; (c) to discover the accurate impact of public debt on economic growth in different groups of ASEAN countries by studying the augmented

Solow growth model and applying it to an empirical panel data analysis on public debt and economic growth in ASEAN countries.

The dissertation combines the standard method of analyzing economic growth by using the Solow growth model in dynamic panel data and the method of historical and institutional analysis on the diversity of economic growth patterns, development strategies and budget principles in ASEAN countries. In order to apply the Solow growth model to an examination of the impact of public debt on per capita income growth in ASEAN, the dissertation divides ASEAN countries into different groups based on income level, development strategy, and the budget rules. The advantage of the research is to develop an econometric analysis based on the standard growth model in the context of growth patterns and public debt structures in ASEAN.

CHAPTER II LITERATURE REVIEW ON THE IMPACT OF PUBLIC DEBT ON ECONOMIC GROWTH

Government borrowings might be a resource for promoting economic growth by pushing up capital accumulation in the long-run (Bulow and Rogoff, 1989; Gill and Pinto, 2005). At a low and reasonable level of public debt, the government has a better chance to borrow more to conduct expansionary fiscal policies and to increase public investment promoting economic growth. However, other researchers such as Barro (1979) and Corden (1989) suggest that the high public debt in the long-run leads to an expected increase in the tax rate when the government has to pay a large part from its revenue for debt service. This expectation of tax increase discourages private investment and capital accumulation. Krugman (1988), Sachs (1989), and Elmendorf and Mankiw (1999) have a similar argument about the negative impact of high public debt on private investment and national savings. Moreover, the capital flight may happen if the country faces the debt overhang problem or the high risk of debt default (Calvo, 1998).

There are a large number of researchers who have studied the impact of public debt

empirically. The majority of empirical studies using data from developed countries take the total public debt to GDP ratio as the variable representing for public debt (Dreger and Reimers, 2013; Chechrita-Westphal and Rother, 2012; Mencinger, Aristovnik and Verbic, 2014; Cecchetti, Mohanty, and Zampolli, 2011; Reinhart and Rogoff, 2010; Kumar and Woo, 2010), and the majority of empirical studies which uses data from developing economies take external debt to GDP as the main variable for public debt (Clements, Bhattacharya, and Nguyen, 2003; Pattillo, Poirson, and Ricci, 2002). There is a bunch of studies on the impact of public debt and fiscal deficit on economic growth of ASEAN countries. Most of the studies focus on the impact of the public debt of single country such as Malaysia, the Philippines, Indonesia, Vietnam, and Laos. A few studies take into account the diversity of economic growth patterns while considering the impact of public debt on economic growth, especially in ASEAN. ASEAN is the region consisting of developed and developing countries; as a result, the economic structures of ASEAN countries are different. The impact of public debt on economic growth is diverse among different groups of ASEAN countries.

CHAPTER III ECONOMIC GROWTH AND PUBLIC DEBT IN ASEAN COUNTRIES

ASEAN is a diverse region in term of per capita income level, the pattern of economic growth and development strategy as well as budget principles. Specifically, ASEAN can be divided into three main groups of countries based on per capita income, which are high-income, upper-middle-income, and lower-middle-income groups. According to the criteria of the World Bank, there are two high-income countries (Singapore and Brunei), two upper-middle-income countries (Malaysia and Thailand), and six lower-middle-income countries (the Philippines, Indonesia, Vietnam, Laos, Myanmar, and Cambodia) (World Bank, 2018). The economic development patterns of different income groups in ASEAN are diversified. High-income countries: Singapore and Brunei depend on current account surplus and trade openness. Singapore is an industrial country with the export-led growth strategy. Brunei is a tiny country

with half of a million people, an oil exporting economy. Upper-middle-income countries: Malaysia and Thailand are export-oriented economies with a long history of development from agricultural nations to export goods producers. Lower-middle-income countries: Indonesia, the Philippines, Vietnam, Laos, Cambodia, Myanmar are less developed members in ASEAN. Lower-middle-income group can be divided into two sub-groups: one includes Indonesia and the Philippines, the other consists of Vietnam, Laos, Cambodia, and Myanmar (V-L-C-M).

CHAPTER IV THEORETICAL FRAMEWORK OF ECONOMIC GROWTH AND EMPIRICAL MODEL

This chapter covers the basic frameworks of the growth model and how public debt variables are included in the growth model. First, it starts with the standard Solow growth model with Cobb-Douglas production function. The standard Solow model predicts that countries with different saving rates and different population growth rates will correspondingly converge to the different steady states of per capita income. Second, we explain the augmented Solow growth model with the presence of human capital in the production function. Mankiw, Romer and Weil (1992) examines the dynamic growth model by adding the human capital variable into the Solow standard growth model with some assumptions on technology. Third, we apply the augmented Solow model to panel data, following Islam (1995) that technology is correlated to saving rate and population growth to produce a dynamic growth model which controls country fixed effects. Finally, we add the debt variables in the dynamic growth model to analyze the impact of public debt on economic growth while controlling other determinants of economic growth.

CHAPTER V EMPIRICAL ANALYSIS OF THE RELATIONSHIP BETWEEN PUBLIC DEBT AND ECONOMIC GROWTH IN ASEAN

5.1 Regression Models and Data

The study follows Pattillo, Poirson, and Ricci (2011) and Cecchetti and Zampolli (2011) by using the following models.

The linear specification:

$$GROWTH_{i,t,t+5} = \varphi + \gamma y_{i,t} + \boldsymbol{\beta} X_{i,t} + \phi DEBT_{i,t} + \eta_t + \mu_i + v_{it}$$

Also, the quadratic specification:

$$GROWTH_{i,t,t+5} = \varphi + \gamma y_{i,t} + \boldsymbol{\beta} X_{i,t} + \phi DEBT_{i,t} + \theta DEBT_{i,t}^{\ 2} + \eta_t + \mu_i + v_{it}$$

In the above models, $GROWTH_{i,t,t+5}$ represents dependent variable, 5-year average growth of real per capita GDP; $y_{i,t}$ represents for log of initial income; $X_{i,t}$ is a set of control variables; $DEBT_{i,t}$ is debt variable; *i* indicates country; and *t* denotes time (year). In these model, v_{it} is error term, η_t is country specific fixed effect, μ_i is time fixed effect, and φ is constant number. Control variables are population growth, inflation rate, the openness of the economy, the index of human capital per person, total dependency ratio, and total investment. The main explanatory variables are gross public debt, external public debt and domestic public debt. Where γ, $\boldsymbol{\beta}$, ϕ, θ are unknown parameters which are estimated by using the fixed effects estimator. By using the quadratic model, the study estimates the average marginal effect of debt on growth or critical threshold for public debt $DEBT_{i,t}$. Over this threshold level, public debt starts to change the sign of impact on economic growth.

$$\frac{\partial GROWTH}{\partial DEBT} = \phi + 2\theta D$$

Therefore, when $\frac{\partial GROWTH}{\partial DEBT}$ = 0, DEBT will equal $-\boldsymbol{\phi}/2\boldsymbol{\theta}$. The level of ($-\boldsymbol{\phi}/2\boldsymbol{\theta}$) is the turning point of the effect of public debt, at which the direction of impact on growth starts to change.

5.2 Empirical Results

Linear Effect of Public debt varies in different groups over 1980-2016 (Fixed Effects Estimator)

Group/Countries	Gross public debt	External public debt	Domestic Public debt
ASEAN (10 countries)	-.0571**	-.0401**	-.0152
ASEAN-8	-.0606**	-.0326	-.0474
Group 6 lower-Middle-income countries	-.0371	.0053	-.0804
V-L-C-M	-.5909	0.0434**	-0.0528

Singapore, Brunei	-0.240	-	-0.240
Thailand, Malaysia	-.2743**	-.0652	-.0827
The Philippines and Indonesia	-.0187	-.2560***	-.0649

Note: Levels of significance: *** p< 1 percent, ** p< 5 percent, * p< 10 percent; ASEAN-8: 8 ASEAN countries not including Singapore and Brunei; V-L-C-M: Vietnam, Laos, Cambodia, and Myanmar. For V-L-C-M, the -time-period is 1990-2016

Non-linear Effect off public debt on Growth varies in the different groups over 1980-2016 (Fixed effects estimator)

Group/ Countries	Model with gross public debt and squared term of the gross public debt		Model with external public debt and squared term of the external public debt		Model with domestic public debt and squared term of the domestic public debt	
	Gross public debt	Gross public debt squared	External public debt	External public debt squared	Domestic Public debt	Domestic public debt squared
ASEAN (10 countries)	.00169	-.00053	-.1241**	.0007*	.0723	-.0013**
ASEAN-8	-.1353	.0007	-.1342**	.0008*	-.1286	.0018
Group 6 lower-Middle-income countries	-.3195	.0024	-.0209	.0002	.0584	-.0029
V-L-C-M	.0949*	-.00039**	.1965**	-.00162**	-.0409	.00005
Singapore, Brunei	-1.328	.0055	-	-	-1.3284	.0055
Thailand, Malaysia	1.005*	-.0159**	.0403	-.0016	-.7849	.0119
The Philippines and Indonesia	-0.5166	.00367	-.644***	.00391**	-.1282	.00113

Note: Levels of significance: *** p< 1 percent, ** p< 5 percent, * p< 10 percent; ASEAN-8: 8 ASEAN countries not including Singapore and Brunei; V-L-C-M: Vietnam, Laos, Cambodia, and Myanmar. For V-L-C-M, the -time-period is 1990-2016

5.3 Robustness Tests

The dissertation conducted a variety of robustness checks. First, the robustness of the fixed effects model's results can be assessed by conducting the other econometric methods such as differenced GMM and system GMM. The GMM specifications are using to correct for the endogeneity of some explanatory variables (the human capital, total investment, current account balance, openness, and debt variables) are instrumented to account for a potential simultaneity bias and the bias introduced by the dynamic growth model in the presence of fixed effect

(Blundell and Bond, 1998). Second, to deal with the existence of structural changes over the sample period, including changes in global risk factors or changes in global economic conditions, time-fixed effects were included. The two financial crises: the Asian financial crisis 1997-1998 and the global financial crisis 2008-2009 are statistically significant in the pooled OLS, fixed effects and GMM models with negative coefficients. Since the economic growth patterns of Singapore and Brunei are sharply different, the dissertation conducted the robustness test to confirm the results of the high-income group by running the regression models for Singapore and Brunei separately.

5.4 Interpreting the results of the economic analysis for different income groups of ASEAN countries

The impact of public debt on economic growth in ASEAN countries differs among income-groups. First, gross public debt and external public debt to GDP ratios have negatively correlated with per capita GDP growth while domestic public debt has no evident effects on economic growth in the whole ASEAN sample. Second, public debt is not a problem to economic growth in two high-income countries since the economic development in these countries strongly depends on the other main variables: initial income, population growth rate, current account, trade openness, and human capital. Third, the non-linear inverse U-shape correlation of gross public debt and economic growth is found in the sample of upper-middle-income countries including Thailand and Malaysia with the threshold of 31.6% GDP. Finally, the adverse impact of external public debt on per capita GDP growth is found in the sample of the Philippines and Indonesia; when external public debt is less than 82.4% GDP, a decrease in external public debt to GDP ratio leads to an increase in the economic growth of the Philippines and Indonesia. Gross public debt and external public debt have non-linear inverse U-shape impacts on economic growth with the thresholds of 122.6% GDP and 60.7% GDP, respectively in the other lower-middle-income sub-group including Vietnam, Laos, Cambodia, and Myanmar.

In a short summary, the effects of public debt on economic growth and the socio-economic conditions of different groups in ASEAN are indicated in the following table. The effect of public debt on per capita GDP growth of different groups in ASEAN is diverse due to the differences in economic growth patterns and other socio-economic conditions which was previously shown in Chapter 3.

Summary of the impact of public debt on economic growth and socio-economic conditions of different groups in ASEAN

Variables	High-income countries	Upper-middle-income	Lower-middle-income	
	Singapore and Brunei	Thailand and Malaysia	The Philippines and Indonesia	Vietnam, Laos, Cambodia, and Myanmar
Gross public debt	Singapore has the highest level of public debt to GDP ratio (above 100% GDP). Brunei has neglect level of public debt (about 3% GDP)	Gross public debt has inverse U-shape effect on the economic growth of Thailand and Malaysia. The threshold is about 31.6% of GDP.	Gross public debt has reduced from more than 100% GDP in the early 1980s to an average level of around 30% of GDP recently.	Gross public debt has an inverse U-shape effect on economic growth
External public debt	There is no external public debt.	The external public debt of Thailand and Malaysia fluctuated over time and recently tends to be stable.	External public debt to GDP has been reduced from a very high level to low and reasonable level. External public debt has a negative effect on economic growth. The threshold is about 82.9% of GDP.	External public debt has a non-linear effect on per capita economic growth of VLCM. The threshold is 60.7% of GDP.
Domestic public debt	All public debt is domestic debt. Public debt does not have a statistically significant effect on	Domestic public debt does not have a statistically significant effect on the economic growth	Domestic public debt does not have a statistically significant effect on economic growth.	Domestic public debt has recently increased due to the development of the domestic capital market.

	economic growth			
Current Account	These countries have high current account surplus.	The current account started being surplus after the Asian crisis 1997-1998.	The current account is positively related to economic growth.	Current account remains deficit for the long time.
Trade openness (Export + Import)	Economic growth depends positively on trade openness	Trade openness increases overtime in term of the amount.	Trade openness statistically has a positive correlation with economic growth	Trade openness of VLCM gradually increases and is positively correlated with economic growth.
Total investment	These countries have a high level of investment.	Malaysia and Thailand have a high level of public investment to GDP ratio, private investment increases over time.	Public investment to GDP ratio of this group was relatively low in ASEAN.	These countries have a high ratio of public investment to GDP ratio in ASEAN.
Human Capital	Human capital is one of the key drivers of economic growth.	The human capital index is in the middle in comparing with other countries in ASEAN.	The human capital index is in the middle in comparing with other countries in ASEAN.	They have low human capital index except for Vietnam. Vietnam ranks the second in ASEAN, after Singapore.
Population	Population growth is negatively correlated with economic growth.	Population growth is negatively correlated with economic growth.	Population growth is negatively correlated with per capita GDP growth.	Population grows fast recently. Population growth is negatively correlated with economic growth.
Initial per capita income	Initial income level is basic for economic growth.	Initial income level is basic for economic growth.	The income per capita is closed to the level of the upper-middle-inco me group	Per capita income is lowest in ASEAN, just in range of USD 1,000 – 2,000 per year.
Financial crises	The Asian financial crisis 1997-1998 and the global financial crisis 2008-2009 didn’t statistically	The Asian financial crisis negatively affected the economic growth of Thailand and Malaysia.	The Asian financial crisis negatively affected the economic growth of the Philippines and Indonesia.	The Asian financial crisis did not affect the economic growth of VLCM much.

	affect economic growth.			
Foreign direct investment	Singapore has the highest FDI inflow amount. Brunei has less amount of FDI inflow.	Foreign direct investment gradually increases over time.	FDI inflow of these countries was high in ASEAN, especially into Indonesia.	FDI inflow mostly goes to Vietnam in this sub-group due to lack of sufficient infrastructure in other countries.
Other socio-economic conditions	Singapore has balanced budget principle; all the borrowings was invested into infrastructure project and for the pension fund. Brunei is an oil-producing economy; the economy growth strongly depends on oil exports.	The economies transformed from agricultural economies to multi-sector emerging economies. They are export-oriented economies.	Governments have strict public debt management policies to control budget deficit and public debt level.	This sub-lower-middle-income group has the highest poverty rate in ASEAN. Most of the population live in a rural area.

CHAPTER VI CONCLUSION

The dissertation suggests some findings as followings.

First, theoretical literature suggests that the low and reasonable level of public debt may have a positive impact on economic growth through productive public investment and expansionary fiscal policy. However, most of the theoretical literature supports the negative link of high public debt level with economic growth through lowering investment, lowering capital accumulation, lowering total factor productivity and causing capital flight because of the high risk of default. In the inverse U shape relationship, positive effect and negative effect of public

debt on economic growth are integrated. The non-linear impact of public debt is examined by many empirical studies using the data sample from advanced countries and developing countries. Most of the existing studies focus on the impacts of total public debt and external public debt while neglecting the impact of domestic public debt on economic growth.

Over the last three decades from the 1980s, total public debt in ASEAN countries increased significantly. However, the overall ratio of public debt to GDP has decreased to a moderate level. Based on the per capita income level, ASEAN has three groups: high-income, upper-middle-income, and lower-middle-income. These groups have different conditions in terms of per capita income level, current account level, budget deficit, gross savings, public investment, poverty level, and industrial structures. High-income countries have only domestic public debt; the main reason may be the fact that they have high current account surplus and gross savings. Singapore has the highest domestic public debt to GDP ratio in ASEAN, but the risk from its debt almost equals to zero. Lower-middle-income countries and upper-middle-income countries have different public debt structures and public debt management policies.

The dissertation summaries detailed procedures of how to apply the Solow growth model to the analysis of the impact of public debt on per capita income growth in ASEAN countries. The Solow growth model was augmented by adding human capital as a part of resources of economic development in the long term, and then it was developed as a regression model which can be applied to the panel data analysis (Mankiw, Romer and Weil, 1992). Later on, Islam (1995) modified the M-R-W model to apply it to an empirical analysis with technology, climate and institutional factors included in the country specifics and correlated with population growth and savings rate. We included debt variables such as total public debt, external public debt and domestic debt as a share of GDP into Islam's regression growth model to test the relationship between public debt and economic growth. With the econometric model based on the Islam model using ASEAN data, the impacts of external public debt and domestic public debt on

economic growth are examined.

This study has provided empirical evidence about the relationship between public debt and economic growth for a panel of 10 ASEAN countries referring to their economic structures. Methodologically, the dissertation used the fixed effects model to estimate the impacts of the debt to GDP ratio on economic growth. Initially, the dissertation divided ASEAN countries into three groups based on per capita income as suggested by the World Bank, which is high-income, upper-middle-income and lower-middle-income countries. The results, based on the fixed effects model, have shown that this is the right direction and suggest that the impact of public debt on economic growth in ASEAN is diverse among different groups of countries:

(1) The group of high-income countries including Singapore and Brunei has high gross savings and current account surplus; these governments do not depend on the public debt to promote economic growth. Other variables such as human capital, trade openness, initial income, population growth rate determine the economic growth patterns of these two high-income countries.

(2) In the upper-middle-income group including Thailand and Malaysia, gross public debt has non-linear inverse U-shape impact on per capita income growth with the threshold of 31.6% GDP. In the past, the government promoted economic growth on the basis of public debt while the debt level was moving around the threshold level. The public debt level of these countries currently exceeds this threshold level; the government should pay more attention to controlling its debt level.

(3) The results of the study suggest that the lower-middle-income group should be divided into two sub-groups: one includes the Philippines and Indonesia, and the other one consists of Vietnam, Laos, Cambodia, and Myanmar. The U-shape relationship between external public debt to GDP ratio and economic growth is found in the sub-group of the Philippines and Indonesia, with the threshold of 82.4% GDP. However, the negative impact is strongly confirmed

by the linear model since the external public debt level of these countries was lower than 80% GDP most of the studied period. Therefore, a decrease in external public debt leads to an increase in per capita GDP growth in Indonesia and the Philippines.

(4) The sub-group including Vietnam, Laos, Cambodia, and Myanmar depends on the external borrowing to promote economic growth while the domestic capital market is limited. External public debt has inverse U-shape impact on economic growth with the threshold of 60.7% GDP. When external public debt is lower than this threshold, an increase in external borrowing leads to a rise in per capita income growth. Besides, gross public debt also has an inverse U-shape effect on economic growth with the threshold of 122.6 % GDP which is much higher than those obtained by the previous empirical studies. Developing countries often depend much on external borrowing. External public debt plays a crucial role in creating financial sources for development and promoting economic growth, but careful controlling external public debt to GDP ratio is also necessary.

審査結果の要旨

本論文は、ASEAN10 カ国を対象に政府債務の経済成長に与える影響を分析している。Chapter 1 Introduction では、本論文の課題と分析方法が説明される。Chapter 2 Literature Review on the Impact of Public Debt on Economic Growth では、政府債務が経済成長に与える影響に関する主要な先行研究を整理している。理論的研究において、Elmendorf and Mankiw (1999)などで指摘されているように、短期においては政府債務に基づく政府投資によって資本蓄積が促進される。これに対して、Barro(1979)は、長期わたる高水準の政府債務は将来わたる課税の増加をもたらすことを予想させ、民間投資と資本蓄積を減退させる効果を持つと指摘している。さらに、Krugman(1988)や Corden(1989)なども高水準の政府債務が返済不可能となるリスクを上昇させることで資本蓄積に負の影響を与える点を指摘している。Cohen and Sachs (1986)などのように、政府債務が低水準のときには正の効果をもつが、高水準に移行するにしたが って負の効果が強まるという非線形関係が存在を主張するものもあるが、一般的規則性そのものに懐疑的な見解も存在している。実証研究のうち、ASEAN 諸国を対象にした研究としては、主として個々の国を対象として政府債務の負の影響や非線形関係を指摘するものが多いが、ASEAN 全体を包括する研究はほとんどない。Chapter 3 Economic Growth and Public Debt in ASEAN: Diversity of Growth Patterns and Debt Structures では、ASEAN 各国の経済成長パターンと債務構造について確認している。まず、ASEAN 諸国を、世界銀行の分類に基づき 1 人当たり国民所得のデータにしたがって「高所得国」（シンガポール、ブルネイ）、「上位中所得国」（タイ、マレーシア）、「下位中所得国Ⅰ」（インドネシア、フィリピン）、「下位中所得国Ⅱ」（ベトナム、カンボジア、ミャンマー、ラオス）に分類する。Chapter 4 Theoretical Framework of Economic Growth and Empirical Model では、Mankiw, Romer and Weil (1992)の新古典派成長モデルを紹介したのち、それをパネルデー

タ分析に応用した Islam(1995)を検討している。Chapter 5
Empirical Analysis of Public Debt and Economic Growth for Different Groups of ASEAN Countries では、 ASEAN 全体と各グループについてパネルデータ分析を行い、１人当たり実質 GDP 成長率（5 年先の平均）に対する政府債務対 GDP 比の影響を検証している。ASEAN 全体でそれは有意ではない。対外債務を有さない「高所得国」は線形推定においても非線形推定においても政府債務対 GDP 比は有意ではなく、むしろ貿易開放度と人的資本（教育水準）が有意である。対内直接投資をもとに輸出主導型工業化を実現してきた「上位中所得国」では、線形推定では政府総債務対 GDP 比の影響は線形推定では有意に負で、非線形推定では逆Ｕ字型で有意で、実績値は閾値周辺か若干閾値を超える水準を比較的安定的に推移してきた。過剰な対外債務を削減させてきた「低位中所得国Ⅰ」では、政府対外債務対 GDP 比は線形推定では有意に負で、非線形推定ではＵ字型の負の相関部分に位置していた。低い発展水準にある「低位中所得国Ⅱ」では、政府対外債務対 GDP 比は、線形推定では有意に正で、非線形推定では逆Ｕ字型の正の相関部分の位置していた。ASEAN 諸国の中で発展水準と政府債務構造が異なるグループ間で異なる分析結果を得たことは、本研究の貢献である。

研究成果は、以下の点で評価できるものである。第１に、経済発展水準と政府債務構造の多様性を持 っている「高所得国」、「上位中所得国」、「下位中所得国Ⅰ」、「下位中所得国Ⅱ」を区別して分析している点は重要な分析視角である。第２に、先行研究の整理をふまえて各国政府の債務構造を明確にすることの重要性を確認し、政府の対外債務と国内債務を区別して各グループについて政府債務が経済成長に与える影響を分析している点である。第３に、新古典派成長モデルをふまえ、それをパネルデータ分析に応用した先行研究を発展させることによって ASEAN 諸国を対象とした独自の計量分析を行っている点である。特に、政府債務（対外債務と国内債務）の対 GDP 比と１人当たり実質 GDP 成長率との関係を、非線形性も考慮しつつ異なるグループごとに分析している点は重要な貢献として評価できる。ただし、本論文は次の改善点を有している。第１に、長期の経済成長過程は、国内産業構造、政府債務構造、そして国際経済関係の構造変化を含んでおり、分析対象期間において各グループの国々がいかなる構造変化を経験したかを計量分析において明示的に扱う必要がある。第２に、各国経済に対する外生的ショックの履歴効果をいかに有効に分析するかという問題が残されている。計量分析においては、アジア金融危機及びリーマンショックに対してダミー変数を使用することによって外生的ショックを除去することに努めているが、長期間にわたる履歴効果が存在する可能性がある。第３に、政府債務の対
GDP 比を説明変数として分析を行っているが、それが各国の発展戦略のなかでいかに決定されたか、またそれが様々なチャンネルを通じてどのようにマクロ経済変数に影響を与えてきたか、さらに詳細な各国経済レベルの分析が必要となっている。しかしながら、以上の点は、本論文における研究のさらなる発展を希望するためのものであって、本論文の持つ高い学問的価値を損なうものではない。

なお、本論文のもとになっている既発表論文としては、Tran Thi Phuong“The Impact of Public Debt on Economic Growth: A Literature Survey and Implications for ASEAN Countries,” The Yokohama Journal of Social Sciences, Vol.23, No.3, 2019 がある。

以上のことから、本論文審査委員一同は、本研究科の博士号審査基準③に照らして Tran Thi Phuong,“The Impact of Public Debt on Economic Growth in ASEAN: An Empirical Analysis of External and Domestic Public Debt in Different Groups of ASEAN Countries” が博士（経済学）の学位を授与するに値するものと判断する。