

The Myanmar JOURNAL

Parent Satisfaction on Service Quality of AEC Private School
Khin Thet Htw

The Effects of Work Engagement on Individual Work Performance in
University of Co-operative and Management, Sagaing
Wai Phyo Aung · Thu Zar Win

Time Series Analysis of Foreign Exchange Rate in Myanmar and Korea
Ei Ei Aye

The Effect of Socio-economic Status on Educational Achievement in
Kyaukpadaung Town, Mandalay Region, Myanmar
Yin Mon Thant · Su Pan Hnin

FACTORS INFLUENCING PERFORMANCE OF SAVING AND CREDIT
CO-OPERATIVE SOCIETIES IN SAGAING CITY
Zin Nwe Htw

Effect of Employee Training on Employee Performance of Private
Hospitals in Mandalay
Htet Htet Hlaing, Moe Moe Myat and Banyar Aung

Demography and Socio-economic Factors Affecting on Women's
Empowerment Index in Sagaing Region, Myanmar
Khin San Kyi · Khin Aye Myint

Determinants of Teachers' Attitudes towards E-learning in University of
Co-operative and Management, Thanlyin and Sagaing Wai Wai Myint

Local Residents' Attitudes to Tourism Development in Min Kun,
Sagaing Township, Sagaing Region
Chaw Ei Ei Tun · Ei Shwe Sin Min Htun

Factor Affecting of Member Commitment on Co-operative Society in
Myanmar : A Case Study of Loikaw Township, Kayah State Nway Oo

Work Stress and Its effect on Teachers' Performance: Case study of
University of Co-operative and Management, Sagaing
Wint War Khin

Motivation and Employee Job Satisfaction at Private Banks in
Kyaukpadaung Ei Ei Po · Lin Yati Oo

The Role of Co-operative Microfinance in the Socio-economic
Development of Members: A Case Study of Sin Min Agricultural
and General Trading Co-operative Society Ltd., Sin Tāt Village,
Sagaing Township Soe Yu Nwe

A Study of Urban Informal Sector in Mandalay, Myanmar
Zaw Htet Pine

Time Series Analysis Model for Production of On-shore Gas in
Myanmar Phyu Phyu Khaing · Yin Yin Wint

Effects of Logistics Activities on Firm Performance of
Pharmaceutical Factory (Insein) Than Thu Zar

Improvement of Regulatory Risk Management System for
Myanmar Insurance Industry
Changsoo Lee, Ei Nandar Aung and Thiri Phyo Wai

Factors Affecting the Development of Small and Medium
Enterprises in Momywa Industrial Zone, Sagaing Region : A Case
Study on Food and Beverage Enterprises Daw Thin Thin Yu

Analysis of Public Debt: Implication for Economic Growth Rate of
Myanmar Thida Htoo

Influencing Factors of Knowledge Sharing on Knowledge Workers
Performance: Case Study in University of Co-operative and
Management Khin Nyein Nyein Soe · Aung Chan Aye

THE EFFECT OF MARKETING COMMUNICATIONS ON BRAND
EQUITY TOWARDS SMARTPHONES: CASE STUDY IN UNIVERSITY
FOR THE DEVELOPMENTS OF THE NATIONAL RACES OF THE UNION
Thu Zar Win · Wai Phyo Aung

The impact of Myanmar's festivals on economic growth
Gwon Osung

Letter from the Editor-in-Chief

Myanmar and Korea have many similarities and are complementary relationship. Therefore, we believe that research exchange will expand mutual understanding between Myanmar and Korea, and will be the cornerstone for mutual development.

KOMYRA and YUE have co-published The Myanmar Journal since August 2014. So far, many scholars have published numerous papers through the journal, and We are sure that this journal has helped many people understand Myanmar and Korea more clearly and closely.

The Myanmar Journal covers various issues in Myanmar and Korea. It covers various topics that can promote bilateral development and mutual understanding, not limited to specific topics such as economy, industry, society, education, welfare, culture, energy, engineering, healthcare, and agriculture.

We hope that this journal will continue to promote understanding of the current status and potential capabilities of Myanmar and South Korea and promote in-depth international exchange and cooperation.

We would like to express our deepest gratitude to the editorial board and YUE and KOMYRA for their valuable support in The Myanmar Journal publication.

February 28, 2022

Youngjun Choi *yj choi*

Editor-in-Chief of THE MYANMAR JOURNAL
Vice-President of KOMYRA
Email: yjchoi@khu.ac.kr
Office: +82-2-961-0485
Web address: komyra.com/doc/scope.php

EDITORIAL BOARD

EDITOR-IN-CHIEF (Yangon University of Economics)

Prof. Mya Thandar, Ph.D. (YUE, Myanmar)

EDITOR-IN-CHIEF (Korea Myanmar Research Association)

Prof. Youngjun Choi, Ph.D. (KHU, Korea)

ASSOCIATE EDITOR-IN-CHIEF

Hyejin Park (KOMYRA, USA)

Nu Nu Lwin (YUE, Myanmar)

Jiyeon Chun, Ph.D. (SCNU, Korea)

Shinwon Kang, Ph.D. (SCNU, Korea)

Journal Managing EDITOR

Kyuyoung Cho (KOMYRA, Timebee, Korea)

Sector EDITOR

Communication and Energy sector EDITOR, Shinwon Kang (SCNU, Korea)

Economic & Management sector EDITOR, John Walsh (SIU RC, Thailand)

Food Engineering sector EDITOR, Jiyeon Chun (SCNU, Korea)

International Law sector, Jeremy Sarkin (University of South Africa, South Africa)

Social Welfare sector EDITOR, Shinsook Lee & Sunghee Kim (SCNU, Korea)

Statistics & Survey statistics sector EDITOR, Jungwha Do (ReLab, Korea)

Technology Management sector EDITOR, Taeho Park (SJSU, USA)

Tourism and Leisure sector EDITOR, Osung Gwon (JNUE, Korea)

Trade & Education sector EDITOR, Youngjun Choi (KHU, Korea)

Language, Literature & Culture Sector EDITOR, Santosh Kumar Ranjan (JNU, India)

Business and Industry sector EDITOR, Myint Moe Chit (U of Nottingham, Malaysia)

Tax accounting sector EDITOR, Hyunwoo Cho (SCNU, Korea)

ADVISORY BOARD

Prof. Taeho Park, Ph.D. (SJSU, USA)

Prof. Tun Aung, Ph.D. (Meiktila University of Economics, Myanmar)

INFORMATION ABOUT The Myanmar Journal

The Myanmar Journal (ISSN 2383-6563) is the official international journal co-published by Yangon University of Economics (YUE) and Korea Myanmar Research Institute (KOMYRA).

This journal aims to promote the mutual cooperation and development of Myanmar and Korea through intensive researches in the entire field of society, economy, culture, and industry.

It will cover all general academic and industrial issues, and share ideas, problems and solution for development of Myanmar.

Articles for publication will be on-line released twice a year at the end of February and August every year on the Myanmar Journal webpage (http://www.komyra.com/bbs/board.php?bo_table=articles).

Analysis of Public Debt: Implication for Economic Growth Rate of Myanmar

Thida Htoo*

Meiktila University of Economics

ABSTRACT : This paper investigates the government public debt on economic growth rate of Myanmar. The objective of the study is to examine the relationship between government public debt and economic growth rate of Myanmar. The study uses the time series data from the period 1997-98 to 2018-2019, using multiple regression model. The result finds that economic growth rate is negatively significant relationship with government public debt but positively significant relationship with growth rate of trade and government revenue. The public debt is not promoting the economy. The growth rate of trade reflects indicators of the openness of the economy and the external competitiveness that have positive impact on economic growth rate. An increase in government revenue has a positively significant relationship with economic growth rate of Myanmar. The public debt can be reduced by promoting trade and raising government revenues. The implication of the finding suggests that government should emphasize on trade policy that facilitates bilateral and multilateral trade and export promotion which in turn lead to export earnings and government revenues. This leads to reducing budget deficit and public debt and thereby leading to faster economic growth rate of Myanmar.

Key words : *Public debt, Economic growth rate, Growth rate of trade, Government revenue, Trade policy*

I. Introduction

Countries in the world have public debt after global economic crisis of 2008 even

* Dr., Pro-Rector, Meiktila University of Economics.

in the developed countries. Public debt including domestic and external debt positively or negatively affect the economy of a country. This indicates that it stimulates or hampers the economic growth of the country. Many studies show that public debt adversely affects the economic growth of a country. Economic growth is necessary but not sufficient for economic development. If a country endeavors for its economic development, it has to gain economic growth. Economic growth is thus one of the macroeconomic objectives which is a common objective for all countries regardless of developing or developed countries. Governments in every country therefore endeavor to achieve both sustainable economic growth and reduction in public debt through macroeconomic instruments such as fiscal and monetary policy that the country has been implementing.

Government of Myanmar also faces domestic and external debt due to carrying out the development tasks that need for a county. Government makes greatest effort to gain sustainable high economic growth through sector-wise and region-wise targets and export targets in the plans and inflow of investment. Concerns over increase in public debt reflects the detrimental effect on economic growth. Government enhances cooperation between the State and private sector for reduction in public financial burden. It intends to examine the research question on whether or not public debt negatively or positively affects the economic growth rate of Myanmar.

The objective of the study is to examine the effect of government public debt on the economic growth rate of Myanmar.

The study is organized into three parts: literature review; overview of Myanmar Economy including government revenue, expenditure and fiscal balance and the empirical analysis of government public debt on economic growth rate of Myanmar and ends up with conclusion and recommendation.

According to the Keynesian economic thought, government debt is required for improving the economy since government debt is the nature of a consequence of government expenditure. The government debt depends on the government size of a country, measured by government spending. The government's borrowing decision is thus influenced by government expenditure in order to support public infrastructure. The increasing government expenditure thus reflects the rising public debt.

On the contrary, rising public debt stimulates the net flow of fund into the public sector (Elmendorf & Mankiw, 1999). The rising public debt is due to the result of rising budget deficit. In a such situation, what government must do is to raise the government revenue and government should use it transparently and thereby leading to public confidence.

The role of institution needs to be strengthened in order to accelerate economic growth of a country. A country can enhance investment and thereby leading to

economic growth of a country (Cordella et al., 2010). On the contrary, there is a positive relationship between public debt and GDP. This is confirmed by the study of Pham Thi Phuong Thao (2018) who shows that growth rate of GDP per capita is positively related with public debt in six ASEAN countries and by the study of Stella Spilioti (2015) who finds that public debt and economic growth is positive relationship in Euro area.

The military spending, and corruption are negatively related with economic growth (D'Agostino et al., 2016). This is confirmed that government expenditure on education and health are relatively small compared to other sectors which may exist in corruption. This means that rent-seeking behavior may exist in other sectors compare to education and health sectors (D'Agostino et al., 2016).

Population growth rate is considered as a control variable in a country. Increase in population growth rate affects the government expenditure and thus leads to fiscal deficit in a country. On the other hand, an increase in population growth causes dependency burden for a country in the forms of old age person, retired person, and unemployment. It also affected on government expenditure and on the level of debt.

Social welfare such as social safety nets also influence on fiscal balance because it is partially financed by government revenues. According to Barro (1979), social safety nets exist as a role as an automatic stabilizer in response to increase in unemployment rate. If a country has tax fluctuations, government relies on debt in order to avoid distorting tax fluctuations. Due to this reason, government debt can increase to avoid fluctuation of tax.

Whenever government has burden of public debt, people recognizes that they need to save some amount of money (Barro 1974). People saving in turn leads to increase in investment. Increasing investment leads to economic growth through capital accumulation. As a result, economic growth cannot be affected by increasing public debt. This indicates the positive relationship between public debt and economic growth of a country according to the Ricardian Equivalence.

II. Literature review

1. Relationship between Public Debt and Economic Growth

An increase in government spending has a positive effect on GDP. This leads to an increase in saving and an increase in investment which stimulate

the economy. This indicates that an increase in saving has positive effect on economic behavior that generates investment and employment according to the Keynesian theory. The GDP growth is directly affected by consumption, investment, government purchase and net export.

What factors influence the public debt including domestic debt and external debt in a country? Every country has common macroeconomic objectives such as high level of output, price stability and low level of unemployment. Instability of macroeconomic environment including fluctuation of output growth, inflation, and lower trade growth tend to affect the public debt in a country.

Trade growth rate influences on public debt. Trade growth rate is positive impact on public debt due to the fact that country becomes more openness and thus leading to more attractive to inflow of foreign direct investment. Trade growth is regarded as a proxy for the openness of the country.

Foreign direct investment is regarded as country's ability to attract more foreign investment. The more inflow of foreign direct investment into a country, the less burden on government' external debt for public infrastructure. This indicates that high inflow of FDI negatively affects on public debt.

Public debt negatively affects the economic growth of a country. This confirms that the public debt is negatively affected the GDP in Malaysia (Lee & Ng 2015). This means that government debt seems to be disadvantage whenever government uses it as current expenditure. On the contrary, government uses it as capital expenditure, government debt seems to be advantages in terms of the idea of the Golden Rule of Public Finance (Modigliani et al., 1998; Creel and Fitoussi 2000; Le Cacheux 2002; Blanchard and Giavazzi 2004). A 10% increase in debt-to GDP ratio decreases in average 0.1-0.2 percentage points in economic growth (Eunji Kim, Yoonhee Ha and Sangheon Kim, 2017:4).

Rising public debt- to-GDP ratio causes the currency depreciation and high inflation. Inflation also influences on macroeconomic imbalance. Public debt increases the general price level and consumer price index. This in turn leads to rising inflation. The result is that country becomes more unstable and thus leading to lower economic growth. According to Guscina (2008), the share of higher domestic debt to total government debt is related with

low inflation. It is argued by the Eroslund et al., (2011) that inflation is not statistically significant effect on the public debt composition.

Rising public debt may increase in private interest rate and result in decrease in private investment (Leblang & Satyanath, 2005). This is confirmed that the cause of decreasing GDP growth is the result of continuous increases in the debt-to-GDP ratio in the long term. If the economic fluctuation needs to be smooth out in the long term, debt-to-GDP ratio should be temporary (Alexander Chudik, Kamiar Mohaddes, M. Hashem Pesaran and Mehdi Raissi 2018).

2. Prior research

Peter N., Denis N. Yuni and Chukwuedo S. Oburota (2013) have taken in consideration for their study in Nigeria to evaluate the relationship between economic growth and public domestic debt, applying the error correction model procedures including a testing of attribute of the time series employing unit root and co-integration test. The result finds that domestic debt and government expenditure have directly relationship with economic growth while debt servicing has negatively relationship with economic growth. The research suggests that domestic debt ought to be used in more productive manner and thereby leading to achieving further productivity gain in the expansion on expenditure of capital project.

Terry Ryan and Isaya Maana (2014) analyzes Kenya's public debt sustainability and trade-off between holding domestic public debt and external debt, employing stochastic debt sustainability approach and co-integration approach. The research finds that there is sustainability in public debt. The key factors that influencing on sustainable path of public debt for the medium-term are policy implementation to facilitate faster economic growth, public debt restructuring towards cheaper external borrowing, justification of recurrent expenditure, capital market deepening to extend domestic debt for further maturity. The effective ways are to improve the trade deficit for the reduction of exchange rate vulnerability, justification of government expenditure to raise the share of development expenditure and encouraging the absorption of development fund, promoting efforts for domestic revenue mobilization, and reduction of the exchange rate vulnerability to external shocks.

Grace Wanjiku Mwaniki (2016) have done the annual time series data during the period between 2003 and 2015 to examine the effect of public debt on GDP of Kenya, applying Ordinary Least Square regression. The result finds that government securities have positive relationship with GDP at 5% significant level. The external debt and bank loans are negative relationship with GDP while government securities

and overdraft from the Central Bank have direct relationship with GDP. The research recommends that what government must do is to enhance sustainable domestic and external borrowing with productive manners.

Mstislav P. Afanasiev and Natalia N. Shash (2016) examines the public debt on economy of Russia. The study finds that public debt may have a positive and a negative effect on microeconomic process in Russia economy. An increase in public debt may cause negative macroeconomic impact on countries with developing markets. What government must do to develop a strategy on macroeconomic process which can support for efficient debt to develop the stimulating effect of public debt.

Alejandro D. Jacobo and Ileana R Jalile (2017) have taken into consideration for their study of government debts and its impact on GDP in such 16 Latin American economies during the period between 1960 to 2015, using such variables as GDP per capita growth rate, initial level of GDP per capita, a share of gross government debt to GDP, rate of investment, time fixed effects and country fixed effects, stability of price proxy for rate of inflation, taxation, and fiscal discipline. The study finds that debt had positive impact on economic growth. This indicates additional debt had a motivating impact on economic growth. The democratic government achieves high economic growth rate according to selected institutional variables.

Eunji Kim , Yoonhee Ha and Sangheon Kim (2017) uses the data of 77 countries from 1990 to 2014 to examine the effect of corruption on the relationship between public debt and economic growth, applying pooled ordinary least squares, fixed effects models and the dynamic panel generalized method of moments (GMM) models (Arellano-Bond, 1991). The research finds that corruption and public debt are statistically significant, indicating that the countries with high corruption face with public debt. The public debt adversely affects on economic growth. On the contrary, countries without corruption, public debt stimulates the economic growth of these countries and vice versa.

Gómez-Puig M & Sosvilla-Rivero S (2017) have done the annual data from central and peripheral countries of the EURO area to investigate the relationship between public debt and economic growth from the period 1961 to 2013, using production function with the Autoregressive Distributed Lag (ARDL) bounds testing approach. The research finds that public debt has a positive effect on short-term economic growth and an adverse impact on long term economic growth of the central and peripheral countries of the EURO area.

Eneida Përmeti Çifligu (2018) have done a study for the relationship between economic growth and public debt in Albania, by comparing with other countries to assess how public debt performance affects trend of GDP growth. The study finds such key factors as prudent fiscal and monetary police, steady growth of investment, macroeconomic sustainability, and the workforces' shift to high productivity from low

productivity. The growth of public debt directly causes the budget deficit. The study suggests that policy makers should pay more attention on raising tax revenues compared to reduction in government spending as the best option to reduce the budget deficit. The best way is to reinforce inclusive sanctions and control to those people avoiding paying taxes. The transparency should be for the use of tax money to the general public since transparency strengthen confidence. The confidence raises the taxpayers' awareness that tax revenue is being used for benefit of taxpayers.

Inna Shkolnyk and Viktoriia Koilo (2018) analyzes the relationship between external debt and economic growth in emerging economies during the period between 2006 and 2016, using such econometric tools as correlation analysis and ADL model. The research finds that an increase in external debt hampers the economic growth for emerging countries. The marginal external debt is negative impact on economic growth due to the consequence of the implementation problem for management strategy of public debt. The research recommends that appropriate organization support becomes necessary in emerging countries.

Josephat Lotto and Catherine T.Mmmari (2018) analyzes the impact of domestic debt on economic growth in Tanzania during the period between 1990 to 2015, applying Ordinary Least Square regression (OLS) method. The result shows that domestic debt and the annual GDP growth have negatively insignificant in Tanzania due to increasing trend in domestic borrowing, government lenders' profile that cause the crowding out effect, inappropriate use of the domestic borrowed funds which include funding budgetary deficits, paying up principal and interest on borrowed funds, developing financial markets. The gross capital formation, foreign direct investment, and export are positively significant on economic growth. The inflation, and government expenditure have negative effect on annual GDP growth. Requirement for the government is to perform prudential financial management and better debt management strategies in one hand and maintain 45% of GDP as internationally acceptable debt level and maintain a GDP growth rate of not less than 5% on the other hand. Government should attract domestic and foreign direct investment through creating enabling an environment and policies as well as think about the types of foreign direct investment.

PHAM Thi Phuong Thao (2018) examines the impact of public debt on economic growth in Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam over the period 1995-2015, applying regression analysis depending on estimation of General Method of Moments (GMM). This study considers such control variables as gross fixed capital formation, FDI and real effective exchange rate. The research finds that public debt is positively impact on real GDP per capita growth rate and there is no negative impact of indebtedness on real GDP per capita growth rate on these six ASEAN countries. This indicates that the more the public debt, the more finance in

public investment of Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam. The public debt can be utilized effectively in public investment in current stage of development. It can enhance economic growth of six ASEAN countries in the long-term. The result finds such two key factors as gross fixed capital formation and FDI that contribute to the development of ASEAN economies.

Nur Hayati Abd Rahman, Shafinar Ismail & Abdul Rahim Ridzuan (2019) have done systematic review on the research for threshold of debt towards GDP, using such Meta-Analyses (PRISMA) as identification, screening and eligibility. The result finds that there is no relationship between economic growth and public debt. The result contributes to government and policymakers to design fiscal policy through exploring the effect of prevailing debt on economic growth.

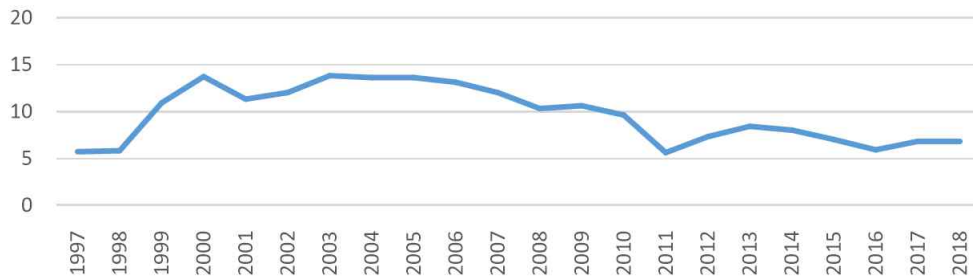
Ranjan Kumar Mohanty and Sidheswar Panda (2019) have taken in consideration for their study in India during the period between 1980 to 2017, applying a Structural Vector Autoregression (SVAR) framework to assess the impact of different categories of public debt on inflation, investment, interest rate and economic growth. The result finds that public debt has negatively impact on economic growth while it has positively impact on long-term interest rate. Public debt has also a positive and negative on inflation and investment in India. The external debt is less adverse impact on the Indian Economy than domestic debt. The study recommends that public debt particularly the domestic debt ought to be controlled and employed in a more productive manner for gaining advantageous on the Indian Economy.

III. Overview of Myanmar Economy

1. GDP growth rate of Myanmar

Myanmar's economic sector can be classified into three sectors such as agricultural sector, industrial sector and service sector. The economic growth rate of Myanmar can be seen in Figure (1).

Figure 1. GDP growth rate (%)



Source: Statistical Yearbooks, Various Issues

The economic growth has been significant in 2010 due to rapidly increase in growth rate of GDP till 2014-2015, indicating that economic growth rate is upward trend as a result of government encouragement in manufacturing sector. However, the average growth rate of GDP has decreasing trend starting from 2015-2016 accounting for 9.5 percent due to the impact of Cyclone Komen in 2015 as well as fluctuation in agricultural production associated with climate-related natural disasters and lack of capacity to adopt climate change adaptation strategies in response to climate change. The share of the industry and service sector has increasing trend while the share of agricultural GDP had decreasing trend over the period between 2000 and 2019. Decreasing trend in agriculture alerts Myanmar agriculture needs to be sustainable production and thereby leading to sustainable agricultural practices.

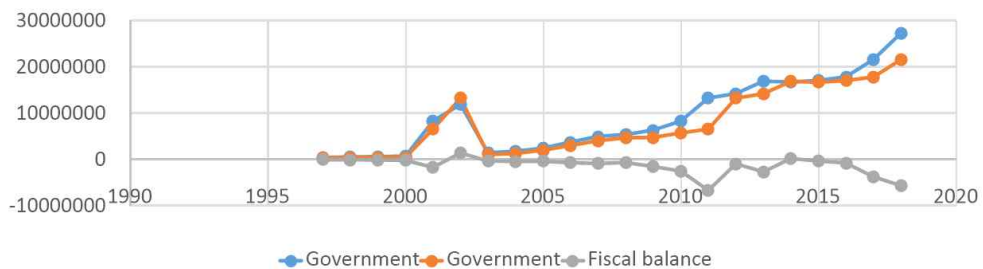
2. Government revenue and expenditure and fiscal balance in Myanmar

Myanmar focuses the role of public finance whereas it has been trying to achieve the Sustainable Development Goals (SDGs). According to the Myanmar Sustainable Development plan, it has three pillars and five goals. The three pillars are peace and stability (Pillar 1), prosperity and partnership (pillar 2), and people and planet (pillar 3). As a peaceful prosperous and democratic Myanmar, Myanmar has five goals: National Reconciliation, Security & Good Governance as goal 1; Economic Stability & Strengthened Macroeconomic Management as goal 2; Job Creation & Private Sector Led Growth as goal 3; Human Resources & Social Development for a 21st Century Society as goal 4 and Natural Resources & the Environment for Prosperity of the Nation as goal 5 respectively. Government emphasizes on managing exchange rate and balance of payments, reduction in inflation and maintaining monetary stability, mobilizing domestic resources through a transparent, efficient and fair tax system, strengthening public financial management to facilitate efficient allocation of public resources and enhancing competitiveness and efficiency of SOEs (Thiri Aung

2019). This indicates public finance plays a vital role for country's economic growth. If government revenue and expenditure are imbalance, economic growth are instable due to government budget deficit and in turn leads to rely on public debt. To finance the budget deficit, government relies on tax revenues or public debt.

According to the tax policy, effort are being made by the government to obtain tax revenues in accordance with legal framework, to develop tax system to facilitate the market economic system, to adjust consumption, investment and saving for sustainable development through tax system, to adjust for promoting national health through tax system, and to maintain sustainable natural environment and resources through tax system (2018-2019 citizen budget, p.5). Due to this tax policy, government collects tax revenues from extractive industries and tries to strengthen tax collection system and broaden the tax base to obtain high tax revenue. The government expenditure, revenue and fiscal balance can be seen in Figure (2).

Figure 2. Government expenditure, Government revenue and Fiscal Balance



Government spends expenditure for productive manner through collection tax revenue. Government spending on social sector is (5.16%) of GDP in 2018-2019 including education, health, and social welfare. Government spending on social sector is significantly higher after 2012 compare to military expenditure. However, government spending on agriculture is still low compare to other sectors. According to the government expenditure policy, government makes efforts on promoting spending on education, health and social welfare; allocating spending on development of Small and Medium Enterprises (SMEs); allowing staff recruitment systematically; Official Development Assistance, and public-private partnership; monitoring procurement with domestic currency for reducing foreign exchange, accepting foreign aid and external debt in accordance with ODA policy, increasing spending on rural development, access to electricity, road, drinking water and water for agriculture.

The other necessary change is to increase tax, which has historically been extremely low in Myanmar. Increased and progressive taxation provides enormous

opportunities for more reliable social investment in the future.

IV. Discussion and Results

This section focuses current situation of SMEs in Myanmar, SMEs development policy in Myanmar, challenges for SMEs development in Myanmar, conditions of SMEs in Sagaing Region, and the conditions of SMEs in Monywa Industrial zone.

1. Method of study

The study uses the time series data from the period 1997-98 to 2018-2019, using multiple regression model by applying Stata software. The secondary data are collected from both Statistical Yearbook and Citizen Budget from various issues published by Ministry of Planning, Finance and Industry, and relevant website.

2. Model Specification

The study uses multiple regression model to estimate the relationship between government public debt and economic growth rate. The study predicts that public debt is estimated to have a negative effect on economic growth rate.

The general model that is estimated in explaining the relationship between government public debt and economic growth rate is stated as:

$$\text{GDPgr} = \alpha_0 + \beta_1 \text{GDPC} + \beta_2 \text{PD} + \beta_3 X + \varepsilon$$

where

GDPgr = Growth rate of GDP (in percent)

GDPC = GDP per capita

PD = Public debt

X = the vector of control variables that affect GDP growth rate (including population growth rate, unemployment rate, trade growth rate, FDI, consumer price index, government revenue and government expenditure, consumption and investment)

α = the constant term

β = the coefficients of independent variables

ε = error term

In this study, growth rate of GDP is designated as a dependent variable and

other main variables such as population growth rate, unemployment rate, trade growth rate, FDI, consumer price index (CPI), government revenue and government expenditure, consumption and investment are considered as independent variables.

Prior to inferring result from estimation of variables, it is vital to undertake some statistical tests. The study attempts to make the heteroskedasticity tests. Breusch-pagan /cook-Weisberg test have done to test heteroskedasticity. Chi-square test is done for the recognition of the severity and existence of heteroskedasticity.

3. Empirical Results

This section shows estimation results of the model. The relevant test statistics are applied in the estimation. Table (1) shows the result of multiple regression analysis of the model. The R², coefficient of multiple determinations is the value of 0.9296, indicating that the total variation in the GDP growth rate is accounted for by 92.96% of the independent variables included in the model.

The model shows that the prob> F = 0.0000, This confirms that at least one independent variable exists as significant variable for the model because model is significant.

Table (1) displays that in the model, the main variables such as public debt, trade growth rate, and government revenues have significant relationship with economic growth rate. Breusch-pagan/cook-weisberg test are done for heteroskedasticity for a time series regression. The model has no heteroskedasticity in the study. T-test and estimation of regression coefficient for the model is shown the Table (1).

Table 1. Regression result of the model

GDP growth rate	Coefficient	Standard error	t	p> t
Trade growth rate	0.9179801	0.0719066	12.77	0.0000***
Public Debt	-0.0000373	9.02e-06	-4.13	0.001***
Government revenue	0.000000121	4.70e-08	2.58	0.019**
constant	1.055829	0.8468489	1.25	0.228
R ²	0.9296			
Adjusted R ²	0.9178			
F	79.18			

*** 1% significant

** 5% significant

According to the empirical result, it is found that trade growth rate, and government revenue are found as positive significant with economic growth rate of Myanmar while public debt is found as negative significant with economic growth rate of Myanmar. The trade growth rate has the biggest positive effect on economic

growth rate of Myanmar. This indicates that 1 percent increase in trade growth rate leads to an increase of GDP growth rate by 91.8%. The trade growth rate is significant at 1% level of significance. Trade growth rate is regarded as a proxy for the openness of the country. This indicates country becomes more openness and consequently it leads to more attractive to inflow of foreign direct investment. It is confirmed that inflow of foreign direct investment has been increasing trend since year 2010. Increased inflow of foreign direct investment reflects country's ability to attract more foreign direct investment. The more inflow of foreign direct investment into the country, the less burden on government public debt especially external debt. The relationship between trade growth rate and GDP growth rate are consistent with economic theory.

The public debt has negative relationship with economic growth rate of Myanmar. This indicates that 1% increase in receipt of public debt leads to a decrease in economic growth rate by 0.0037%. It is found that public debt contributes less to economic growth rate of country. The receipt of public debt may use in unproductive sectors that discourage the economic growth rate of Myanmar. If the public debt is effectively used in productive sectors, this will accumulate capital and thus leading to stimulating the economic growth rate of Myanmar. Government should channel borrowed funds towards diversification and expansion thereby leading to stimulating long-term economic growth and government have ability to pay its debt when maturity date is due.

The government revenue is found as positive significant with GDP growth rate of Myanmar at 5% level of significance. This means that 1 percent increase in government revenue leads to an increase of GDP growth rate by 0.0000121%. Although government revenue is positive relationship with GDP growth rate, it cannot greatly contribute to country's GDP. Government needs to manage to increase government revenues through broadening tax base.

Based on the empirical results obtained from the empirical investigation, conclusion can be drawn.

V. Conclusion and Recommendation

1. Conclusion

The result finds that public debt and economic growth rate is negative relationship while trade growth rate and government revenue are positive relationship in Myanmar. Due to negative relationship between public debt and economic

growth rate, public debt cannot promote the economy. If the public debt is used in productive sectors, it will facilitate economic growth rate of Myanmar since it provides as capital accumulation for growth of the economy. Trade growth rate is positive relationship with economic growth rate of Myanmar. The more openness of the economy facilitates the high growth rate of trade and thereby leading to external competitiveness for the country. Openness of the economy stimulates not only trade growth rate but also inflow of foreign direct investment. Government revenue is positively significant with economic growth rate. However, government revenue needs to be raised through effective tax policy. The public debt can be reduced by promoting trade and raising government revenue.

The result suggests that government should emphasize on trade policy that facilitates bilateral and multilateral trade and export promotion which in turn lead to export earnings and government revenues. This in turn leads to reducing budget deficit and public debt and thereby leading to faster economic growth rate of Myanmar.

2. Recommendation

The budget deficit of country causes the growth of public debt for the country. To reduce government public debt,

- √ policy makers should emphasize to increase tax revenues as the best option to reduce the budget deficit. Government should reinforce tax payers not to avoid paying taxes through government transparency on use of tax money to public and thereby leading to strengthening public confidence.
- √ Government should justify their expenditure in order to increase in share of development expenditure and promote effort for domestic revenue mobilization.
- √ Public debt ought to be used in a more productive manner for attaining further productivity gain with expansion on expenditure of capital project.
- √ Government should attract domestic and foreign direct investment through creating enabling environment and policies to reduce the burden of government public debt.
- √ Government should emphasize on trade policy that facilitate export promotion which in turn leads to export earnings and government revenue and thereby leading to faster economic growth in Myanmar.

Acknowledgements

Firstly, I deeply gratitude to Professor Dr. Shinwon Kang (Sunchon National University), chairman at Korea Myanmar Research Association for giving me a chance for this research paper. Secondly, I would like to express my profound gratitude to Professor Dr. Tun Aung, Rector of Meiktila University of Economics for encouragement. Lastly, I am grateful to the respective persons who help me to collect data and encourage to write this paper. I also deeply owe a great thanks to my parents.

References

- Alejandro D. Jacobo and Ileana R Jalile (2017). The impact of Government Debt on Economic Growth: An Overview for Latin America, Universita Degli Studi Di, Perugia, Working paper No. 28 September 2017, ISSN 2385-2275
- Alexander Chudik, Kamiar Mohaddes, M. Hashem Pesaran and Mehdi Raissi. Rising Public Debt to GDP Can Harm Economic Growth, Vol. 13, No. 3 • March 2018
- Barro, R.J. Are government bonds net wealth? *J. Political Econ.* 1974, 82, 1095–1117. [CrossRef]
- Cordella, T.; Ricci, L.A.; Ruiz-Arranz, M. Debt Overhang or Debt Irrelevance. *IMF Staff Pap.* 2010, 57, 1–24. [CrossRef].
- D'Agostino, G.; Dunne, J.P.; Pieroni, L. Corruption and growth in Africa. *Eur. J. Political Econ.* 2016, 43, 71–88. [CrossRef]
- D'Agostino, G.; Dunne, J.P.; Pieroni, L. Government spending, corruption and economic growth. *World Dev.* 2016, 84, 190–205. [CrossRef].
- Elmendorf, D. and N. Mankiw (1999). Government Debt. In Taylor, J. and Woodford, M. (eds.), *Handbook of Macroeconomics*, vol. 1C, 1615-1669, North-Holland
- Eneida Përmeti Çifligu (2018). *Academic Journal of Interdisciplinary Studies*, Vol 7 No 3 November 2018. E-ISSN 2281-4612 ISSN 2281-3993
- Eunji Kim, Yoonhee Ha and Sangheon Kim (2017). Public Debt, Corruption and Sustainable Economic Growth, MDPI, 15 March 2017
- Gómez-Puig M & Sosvilla-Rivero S (2017). "Public debt and economic growth: Further evidence for the euro area" institut de Recerca en Economia Aplicada Regional i Pública, Research Institute of Applied Economics, Document de Treball 2017/15 1/41 pág, Working Paper 2017/15 1/41 pág
- Inna Shkolnyk and Viktoriia Koilo (2018). The relationship between external debt and economic growth: empirical evidence from Ukraine and other emerging economies, *Investment Management and Financial Innovations*, Volume 15, Issue 1
- Josephat Lotto and Catherine T. Mmmari (2018). Domestic Debt and Economic Growth in Tanzania - An Empirical Analysis. *Journal of Economics and Management Sciences*; Vol. 1, No. 1; 2018 ISSN 2576-3008 E-ISSN 2576-3016 <https://doi.org/10.30560/jems.v1n1p207>

- Lae, Yin Htwe (2017) The Impact of Government of Expenditure on Economic Growth in Myanmar, unpublished Master Thesis, KDI School of Public Policy and Management (p.28).
- Leblang, D. & Satyanath, S. (2005). Politically Generated Uncertainty and Currency Crises: Theory, Tests, and Forecasts. 2005.
- Ministry of Planning, Finance and Industry (2019). 2018-2019 citizen budget, p.5
- Modigliani, F.; Fitoussi, J.P.; Moro, B.; Snowe, D.; Solow, R.; Steinherr, A.; Labini, P (1998). 'An economists' manifesto on unemployment in the European Union. Banca Naz. Lav. Q. Rev. 1998, 51, 327–361. [CrossRef]
- Mstislav P. Afanasiev and Natalia N. Shash (2016). Microeconomic Effects of Growing Public Debt on the Russian Economy, Public Administration Issues. 2016. Special Issue.
- Nur Hayati Abd Rahman, Shafinar Ismail & Abdul Rahim Ridzuan (2019). How does public debt affects economic growth? A systematic review, Rahman et al., Cogent Business & Management (2019), 6: 1701339 <https://doi.org/10.1080/23311975.2019.1701339>
- Peter N.MBA, Denis N. Yuni and Chukwuedo S. Oburota (2013). Analysis of Domestic Debt: Implication for Economic Growth in Nigeria, Global Journal of Social Sciences Vol 12, 2013: 1-9
- Pham Thi Phuong Thao (2018). Impacts of public debt on economic growth in six ASEAN countries, The International Studies Association of Ritsumeikan University: Ritsumeikan Annual Review of International Studies, 2018. ISSN 1347-8214. Vol.17, pp. 63-88
- Ranjan Kumar Mohanty and Sidheswar Panda (2019). How Does Public Debt affect? the Indian Macro-economy? A Structural VAR Approach, NIPFP Working Paper Series No. 245, National Institute of Public Finance and Policy New Delhi
- Saungweme & Odhiambo, Cogent Economics & Finance (2019), Government debt, government debt service and economic growth nexus in Zambia: a multivariate analysis, 7: 1622998 <https://doi.org/10.1080/23322039.2019.1622998>
- Stella Spilioti (2015). The relationship between the government debt and GDP growth: evidence of the Euro area countries Investment Management and Financial Innovations, Volume 12, Issue 1, 2015
- Terry Ryan and Isaya Maana (2014). An Assessment of Kenya's Public Debt Dynamics and Sustainability. Central Bank of Kenya Monetary Policy Committee technical retreat held on 13th and 14th June 2013 in Naivasha, Kenya
- Thiri Aung (2019). Public Finance in Myanmar, internal revenue department, Myanmar.

The Myanmar JOURNAL

– Volume 9 Number 2 February 2022

28 February 2022

Yangon University of Economics (Myanmar)
Korea Myanmar Research Association (Korea)
2014~, Semiannual
ISSN : 2383-6563(Online)

Co-published with **Yangon University of Economics (YUE)** and
Korea Myanmar Research Association (KOMYRA)
<http://www.komyra.com/doc/submission.php>