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Original Article

Behavioral Studies of Fiscal Variables in ASEAN-3: Modern Monetary Policy Approaches

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Abstract: *The dilemma of fiscal deficits during an economic crisis is supposed to stimulate economic growth, but empirically, it often undermines economic growth. The economic crisis provides important lessons on the prudence and complexity of budget deficit management policies. Theoretically, the impact of fiscal deficits is still debatable, and there are distinct limits. Modern Monetary Theory (MMT), as a new heterodox economic thinking rule, attempts to contextualize the combination of monetary and fiscal policy using the endogeneity of money and the role of taxes in overcoming fiscal deficits. This study aims to examine the impact of fiscal deficits on economic growth in ASEAN-3 based on the Modern Monetary Theory framework. Using secondary data and the Generalized Method of Moments (GMM) research method, the results indicate that the behavior of fiscal variables in ASEAN-3 cannot be said to be in accordance with the MMT framework. Only fiscal deficit, domestic savings, inflation, and money supply variables show behavior in accordance with MMT.*

Keywords: *Fiscal Deficit; Money Endogeneity: Taxes; Modern Monetary Theory.*

I. INTRODUCTION

The economic crisis is a challenge theoretically and empirically to create a new model of economic growth policy and change the dominant theoretical paradigm (Hadziahmetovic et al., 2018). The phenomenon of financial crisis is caused by various shocks whose impact can be seen from sluggish economic indicators such as unemployment, declining aggregate demand, and inflation (Gevorkyan, 2015). Fiscal policy is one of the efforts to recover from crises such as the Great Depression, the Asian Financial Crisis (AFC) 1997-1998, and the Global Financial Crisis (GFC) 2007-2009 (Abdullah et al., 2019).

State or government financial management is one form of fiscal policy. When economic conditions are sluggish until the onset of a crisis, the government's financial position is identical to a deficit (Suparman et al., 2021). The government seeks to increase productive spending to encourage economic growth and return to full employment without inflation. However, a budget constraint makes the tradeoff between inflation and unemployment clearer (Asyulinda et al., 2015). If the government's fiscal or financial deficit continues to increase, then sustainable economic growth will be threatened (Reinhart et al., 2012; Tung, 2018; Barro, 1990; Fatima et al., 2012). The crisis provides important lessons on prudence and policy complexity in managing government financial deficits (Blöndal et al., 2009; Wardhono et al., 2015). The condition of the fiscal deficit to overcome the crisis is a dilemma for policymakers.

The impact of fiscal deficits in mainstream or orthodox contexts shows contrasting frameworks. According to Keynes (1936), in the short run, a high fiscal deficit can increase economic growth through the multiplier effect of government spending on aggregate demand (Achchuthan and Velnampy, 2013; Bošnjak, 2018; Salma et al., 2016; Hussain and Haque, 2017). In contrast to Keynes, the Neoclassical viewpoint argues that fiscal deficits, in the long run, will adversely affect the economy because they cause crowding- out and have an impact on economic growth (Bernheim, 1989; Pasichnyi, 2017).

This is different from the Ricardian neutral point of view, that the fiscal deficit does not have a good or bad impact (neutral) because government spending will not affect public consumption (Nwakobi et al., 2018). Individuals will respond neutrally to the fiscal deficit, while consumers and investors will ignore the existence of fiscal stimulus. Individuals will believe that the fiscal deficit that results in debt will ultimately be paid off by increasing taxes, which will make individuals save a certain amount to pay for future tax increases (Fischer, 1990).

The positive, negative, and neutral impacts of fiscal deficits on economic growth were found in previous research. In the short run, the fiscal deficits of countries in Europe can have a positive impact on economic growth through the probability of capital and profits from business activities (Cinar et al., 2014; Pelagidist and Desli, 2004). However, the positive impact of the fiscal deficit requires the government to set a fiscal deficit threshold (Correia et al., 2013). If the fiscal deficit increases and

occurs sustainably, economic growth in the long run in the form of output, investment, and international trade activities will weaken (Cebula, 1955; Landau, 1983; and Tung, 2018). Fiscal deficits will hurt economic growth, as evidenced by empirical research in MENA countries that shows weak labor productivity and increased inflation (Arjomand et al., 2016). The negative impact of fiscal deficits in the long run, such as in Pakistan, occurs due to low sources of government financing in the form of savings and total income to overcome high expenditures (Fatima et al., 2012).

The positive, negative, and neutral impacts of fiscal deficits on economic growth were found in previous research. In the short run, the fiscal deficits of countries in Europe can have a positive impact on economic growth through the probability of capital and profits from business activities (Cinar et al., 2014; Pelagidist and Desli, 2004). However, the positive impact of the fiscal deficit requires the government to set a fiscal deficit threshold (Correia et al., 2013). If the fiscal deficit increases and occurs sustainably, economic growth in the long run in the form of fiscal deficits can have a positive or negative impact, but they are also neutral on economic growth. Empirically, the impact of neutral fiscal deficits occurs in Sri Lanka and Pakistan; fiscal deficits do not correlate with economic growth (Ahmad, 2013; Achchuthan and Velnampy, 2013). The impact of a neutral fiscal deficit on economic growth is also indirectly seen in the Vietnamese economy from 1989 to 2011 (Van and Sudhipongpracha, 2015). According to the empirical study of Correia et al. (2013), in a certain period, the fiscal deficit will have a positive and negative impact on economic growth in a country. When the fiscal deficit is still at a reasonable level, it will have a positive impact and will create fiscal sustainability to achieve economic growth.

Fiscal sustainability is one of the focuses of policymakers in formulating macroeconomic policies by emphasizing the tradeoff of economic recovery efforts through expansionary fiscal policy (Hart, 2013). The government must be able to maintain public finances in a credible position (without an increase in debt) to achieve sustainable economic growth (Alvarado et al., 2004; Straub and Terada-Hagiwara, 2010; Checherita-Westphal and Rother, 2011; Akram and Rath, 2019). Budget limits or constraints always confront efforts to keep public financial conditions credible during slow economic times. Theoretically, the Neoclassical and Keynesian viewpoints are very contradictory; it can be seen that there is a classical dichotomy where the amount of money in circulation does not affect real variables (money neutrality) (Mankiw, 2016). So, the implementation of the policy becomes limited.

Heterodox thinking, or Modern Monetary Theory (MMT), was born to provide an alternative solution to overcome budget limits through Lerner's financial principles (Hart, 2013). Discretionary fiscal policy and the endogeneity of money in the form of functional finance are the rationale for modern monetary theory to achieve economic growth (Nersisyan and Wray, 2016). Based on post-Keynesian thinking, money is endogenous in the economy because it does not only function as a medium of exchange as in an orthodox economy but also has other functions for the process of production activities (Armstrong, 2017; Moore, 1988). The point of view regarding the endogenous or exogenous role of money is a subject that is still debated in economics (Sieroń, 2019). The orthodox framework argues that the money supply is exogenous and controlled by the monetary authority (Bachurewicz, 2017; Handa, 2009; Walsh, 2010). However, according to the post-Keynesian MMT view, the money supply is endogenous and influenced by the demand for money from credit facilities, working capital, and investment needs (Bachurewicz, 2017; M. Lavoie, 1984; Moore, 1979).

The government can increase productive spending to encourage economic growth without a budget limit. However, the endogeneity of money based on the MMT thinking framework can create inflation when the economy is at full employment as a result of efforts to print money in conditions of falling aggregate demand. Further efforts to overcome inflation are carried out with endogenous taxes within the MMT thinking framework (E. Tymoigne and Wray, 2013). Meanwhile, orthodoxly, taxes only play a role in increasing state revenues (Nasir et al., 2016). The role of taxes in regulating inflation or attracting the money supply is by the taxes-drive-money theory, or what is called chartalism2 in the endogeneity of money theory (Wray, 1998).

The emergence of MMT as a proposition is a new effort to achieve fiscal sustainability. The MMT thinking framework has never been implemented directly but is indirectly seen in the majority of industrial or developed countries such as Latin America, Japan, and China, which have high levels of expenditure to finance the development process (Wray, 2019). Based on Edwards' (2019) empirical study, Latin America once showed a policy pattern similar to MMT during the populist government but failed because of the government's dominance in abusing the role of the central bank, causing high inflation.

The MMT proportion often states that China and Japan are Asian countries that have successfully implemented MMT policies. Empirical research in China by Li, Tan, and Zhang (2020) shows that fiscal policy in the form of debt monetization has been proven to reduce systemic financial risk and minimize inequality. However, several empirical findings show the failure of MMT implementation in Japan. Empirical studies by Xing (2019) and Tokunaga (2020) in Japan show failure due to strong shadow banking based on a multi-currency system, which is contrary to the views of MMT and weak political support and efforts to suppress inflation.

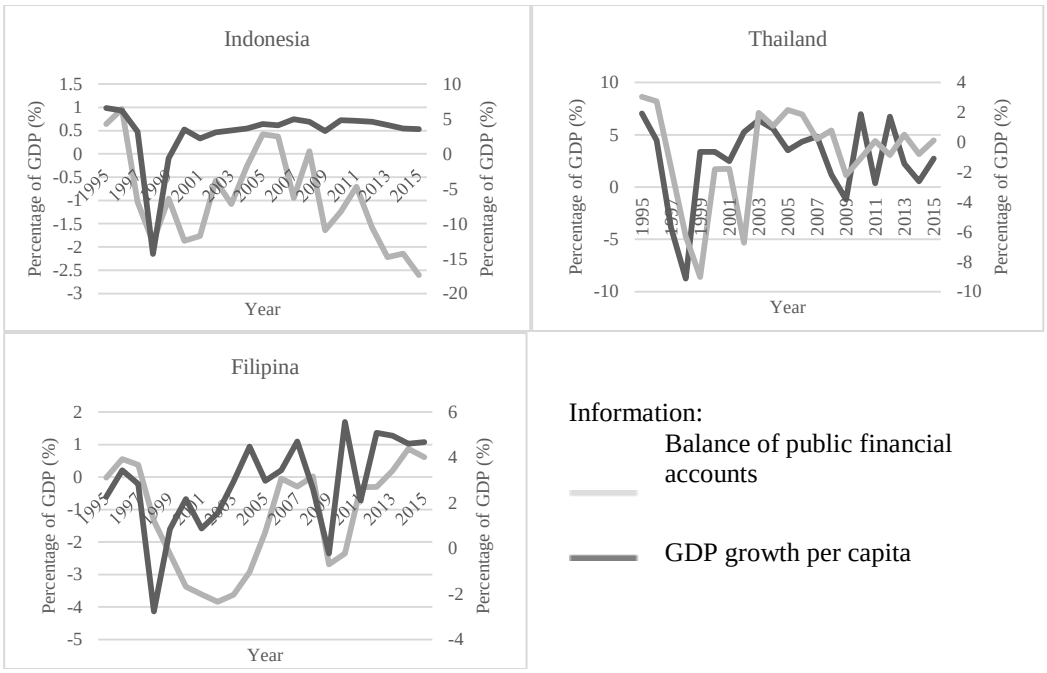

Figure 1: Public Financial Balance and GDP Growth per Capita
Source: *International Monetary Fund and World Bank, 2020 (processed)*

Efforts to achieve fiscal sustainability have become a focus not only in developed countries but also among policymakers in developing countries, such as in the ASEAN (Association of Southeast Asia Nations) region (Thuy, 2018). The emergence of the MMT proportion is a theoretical paradigm update that can be tried for ASEAN countries, especially countries with fiscal deficits and high debt levels. The countries Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam, which are members of the 'ASEAN miracle' 5, have high levels of fiscal deficits from the ratio of budget to GDP (Makin, 2005). Indonesia, Thailand, and the Philippines also have the highest debt levels. This research aims to examine the impact of fiscal deficits on economic growth in ASEAN-3 based on the Modern Monetary Theory framework through fiscal variables. This presentation is composed of four parts. Part I reviews the background, part II concerns the literature review, and part III explains the data and methodology. The discussion and findings will be presented in sections IV and V for conclusions.

II. LITERATURE REVIEW

The global financial crisis has shown the weakness of the orthodox or mainstream economic thinking framework and has developed and created a heterodox thinking framework (Lavoie, 2013). The post-Keynesian thinking framework emerged to provide a more varied and relevant scientific alternative to modern and complex economic phenomena (Zorn, 2016). Modern Monetary Theory (MMT) is a post-Keynesian heterodox thinking framework, different from orthodox economic thinking. MMT is based on the development of monetary theory by integrating the endogeneity of money into the emphasis of the state of money approach, or chartism, from Keynes' thinking by Knapp (1924); the credit money view by Innes (1914); Lerner's (1943) thoughts on the functional finance approach in managing public finances and overcoming fiscal deficit problems; the banking perspective from Minsky (1986); and the sectoral balance approach from Godley (1996).

According to Epstein (2019), MMT emphasizes the important role of aggregate demand, money, and financing in the economy to determine output and employment levels in the short and long term. It is hoped that the problems and impacts of the fiscal deficit that occur due to budget constraints can be eliminated to achieve fiscal sustainability.

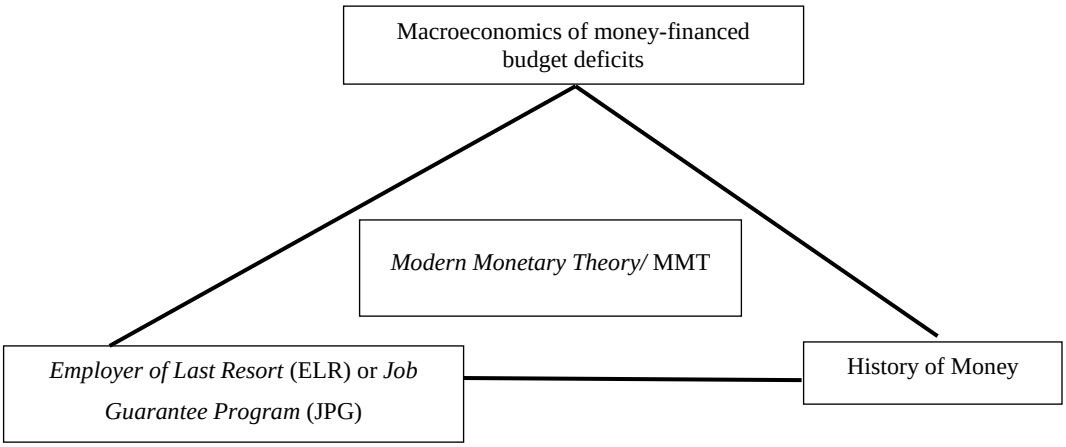

Figure 2: Modern Monetary Theory Framework of Thought (Palley, 2019)

The existence of public financial problems in the form of budget constraints creates coordination between fiscal and monetary policies (Nersisyan & Wray, 2016). According to the MMT perspective, the government, as the fiscal authority, has a discretionary policy in dealing with budget constraints and fiscal deficits. The government will inject domestic currency into the economy by spending on goods and services, which will then be followed by an increase in taxes (Xing, 2019). These efforts will achieve full employment conditions with prices that are unstable or tend to be high (inflation) so that they can be overcome using Lerner's (1943) functional finance principles:

a. The instrument uses government spending and taxes. If government spending is low, the government can achieve macroeconomic goals by increasing government spending. In contrast, if government spending is high, the government can use tax instruments.
b. The government can act as a creditor and debtor in the economy using securities instruments through the central bank. This policy aims to maintain interest rates at a level that can encourage optimal investment.
c. If one of these two fiscal policy rules cannot be achieved, the government can make efforts to print or destroy money.

According to Lerner, the government can sell securities or bonds to deal with excess money (reserves) so that short-term interest rates will rise to prevent excessive investment (Kelton, 2019). If interest rates are low due to increasing deficits, then low interest rates will increase investment spending and stimulate the economy. So Lerner has advantages and a different frame of mind regarding deficits: that interest rates and the purpose of 'borrowing' can minimize the tradeoff between full employment and inflation or the Phillips curve dilemma.

Coordination between fiscal policy and monetary policy needs to be carried out to achieve MMT's goal of eliminating the tradeoff between unemployment and inflation in the long term (Nersisyan and Wray, 2016; Mankiw, 2016). Based on a post-Keynesian thinking framework, MMT focuses on the consolidated relationship between the central bank as the monetary authority and the government as the fiscal authority (Lavoie, 2013).

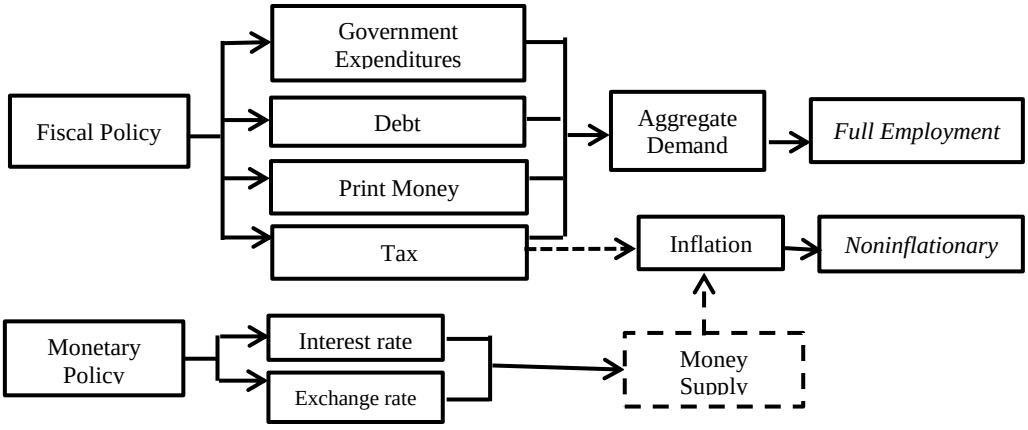

Figure 3: Policy Mechanisms in Modern Monetary Theory (Source: Edwards, Sumner, and Horan, 2019, processed)

The flow of money movements in MMT is explained in Figure 1.3 by the fact that the use of Lerner's financial principles in MMT needs to be supported by the Post-Keynesian endogeneity theory of money in the state of money or chartism approach to achieve goals. Fiscal stimulus policies based on Lerner's financial principles through the multiplier effect of government spending, debt instruments, taxes, and money printing are still faced with high levels of inflation through investment multipliers (Lin, 1967). Based on the endogeneity theory of money, the MMT proposition uses a different point of view regarding the origin and evolution of money to achieve full employment and non-inflationary goals that cannot be achieved using a traditional or orthodox framework of thinking.

According to the endogeneity theory of money in state money, capitalism, or the tax-drive-money approach, money in fiat currency is stated to have an exchange value based on the government's sovereignty in collecting taxes, and money is an effort by a state or government to encourage economic activity (Wray, 1998). The government in the MMT thinking framework will first increase government spending (tax-expenditure cycle) rather than increase taxes as a source of revenue (tax-expenditure cycle) (Baker and Murphy, 2020; Xing, 2019). Thus, taxes do not play an important role in determining government spending but rather explain the absence of budget limits on public finances because they can be used to overcome high levels of inflation in efforts to achieve full employment (Hart, 2013). Taxes will be increased to reduce the inflation rate and push the economy towards a state of full employment and non-inflation (Sumner and Horan, 2019). The role of taxes in the MMT perspective in Figure 1.3 is different from orthodox thinking because the level of deficit influences taxes and plays a role in suppressing the level of inflation. Apart from taxes, efforts to reduce the inflation rate to achieve the dual goal of full employment and non-inflationary can be made with the job guarantee program.

III. RESEARCH METHOD

A) Type and Source of Data

The data used in the research is secondary data in the form of panel data, with the period 1990–2015 and cross-section data consisting of 3 countries, namely Indonesia, the Philippines, and Thailand. The justification for choosing the period is based on the crisis phenomenon that occurred in 1998 and 2008 with high levels of deficit and debt. Meanwhile, the selection of cross-sectional data is based on justification for countries that have high levels of debt and fiscal deficits in ASEAN, which is by the assumptions in MMT. Three countries, consisting of Indonesia, Thailand, and the Philippines, are ASEAN countries that had high levels of debt and deficits during the crisis and post-crisis in 1998 and 2008.

B) Methodology

The use of panel data was chosen because it has the advantages of time series and section data, namely that technically, it can provide different variations for each entity (heterogeneity); it is more informative on data, tends to be efficient, emphasizes the relationship between tends to be efficient, emphasizes the relationship between variables, and increases the degree of freedom; it is better used for dynamic research; it has advantages in detecting and measuring impacts that cannot be observed in time series or cross-section data; it is more likely to be used on models that have more complex behavior; and it can minimize any bias that may occur (Gujarati and Porter, 2009). Research objects on the ASEAN-3 economy will be analyzed using descriptive statistical analysis, the Generalized Method of Movement, and the econometric method. The research model departs from previous research by Abdullah et al. (2019) and Salma et al. (2016), which has been adapted to the MMT thinking framework as follows:

$$GDP = f(OB, TX, TD, DS, INV, INF, M2)$$
$$GDP_{it} = \beta_0 + \beta_1 OB_{it} + \beta_2 TX_{it} + \beta_3 TD_{it} + \beta_4 DS_{it} + \beta_5 INV_{it} + \beta_6 INF_{it} + \beta_7 M2_{it} + \varepsilon_{it}$$

Where □□□ is the growth of GDP per capita, □□ is the level of fiscal deficit, □ □0 is the intercept, □1,2,3 are parameters, and □ are cross-section coefficients, and □ are period coefficients.

IV. RESULTS AND DISCUSSION

A) GMM Estimation Results

The GMM method in this research is used to determine the behavior of fiscal variables on economic growth in ASEAN-3. After testing the best model, namely the panel least squares model, the next stage is to estimate the GMM.

Table 1 Results of Panel GMM Estimates in ASEAN-3

Variabel	Koefisien	T Statistik	Probabilitas
OB	0,560929	1,346046	0,1841
TD	*-0,006439*	-0,312177	*0,7562*
DS	*0,182195*	2,199656	*0,0323**
INV	*-0,235100*	-1,922700	*0,0600*
MON	*-0,051417*	-1,632823	*0,1085*

TX	*-0,162015*	-0,322815	*0,7481*
INF	*-0,317929*	-3,3358465	*0,0015**
T Tabel	*2,004*		
Adjusted R-squared	*0,788115*		
J Statistik	*3,56E-22*		
Chi-Square Tabel	*14,06714*		
Instrumen Rank	*8*		

Based on Table 4.17, it is known that only the INF and DS variables have a significant effect on economic growth in ASEAN-3. This is proven by the probability value being smaller than α or 5% and the statistical T value being greater than the T table. The variable that has a significant effect in a positive direction occurs in the DS variable with a coefficient value of 0.182195. If DS increases by one unit, economic growth increases by 0.182195, assuming other variables remain constant. Meanwhile, the INF variable has a significant negative effect, with a coefficient value of 0.317929. If the INF variable increases by one unit, then economic growth decreases by 0.317929, assuming other variables remain constant.

The adjusted r-squared value in the model is 0.788115, which explains that the independent variable influences economic growth by 78.81%, and the remaining 21.19% is influenced by other variables outside the model. The J-statistic value in the GMM panel estimation is 0.000000, or smaller than the 2 table with the number 14.06714, thus indicating that the null hypothesis is accepted or the model is overidentified. These results are also supported by the instrument rank (8) in this model,l, which is greater than the estimated coefficient (7).

B) Empirical Logic and Study of Modern Monetary Theory in ASEAN-3

The outcomes of the estimation of factors influencing soybean imports in Indonesia will be expounded upon in this subsection. The estimation results can shed light on the factors affecting soybean imports in Indonesia. These factors may originate from the exporting country or the destination country, impacting the volume of trade soybean imports. Therefore, it is essential to identify and analyze whether these factors significantly exert positive or negative effects on the volume of soybean imports in Indonesia.

The framework of Modern Monetary Theory is a structural policy that is guided by monetary sovereignty and the endogeneity of money in achieving price stability (non-inflationary) and full employment in an economy (É. Tymoigne and Wray, 2013). The government can improve a sluggish economy, especially during a crisis, without needing to pay attention to financial budget limits by carrying out injection efforts and then destruction (Baker and Murphy, 2020; E. Tymoigne and Wray, 2013). The role of the government has given rise to a debate between orthodox and heterodox MMT economics, which lies in differences in viewpoints in reading a phenomenon and defining economic variables.

Table 2 Summary of Research Results

Variable	Significance	Direction	Results*
OB	Not significant	Positive	Compatible
TX	Not significant	Negative	Incompatible
TD	Not significant	Negative	Incompatible
DS	Significant	Positive	Compatible
INV	Not significant	Negative	Incompatible
INF	Significant	Negative	Compatible
M2	Not significant	Negative	Compatible

The GMM estimation results show that the behavioral pattern of fiscal variables based on the MMT thinking framework is seen in the variables fiscal deficit (OB), domestic savings (DS), inflation (INF), and M2 (money supply) with a significance level only for the variables domestic savings (DS) and inflation (INF). Meanwhile, the variables tax revenue (TX), government debt (TD), and investment (INV) show a relationship that is not by MMT.

According to Marimuthu et al. (2021), government expenditure in ASEAN countries has a greater contribution to economic growth than government income, which has a negative impact in the long term. However, economic growth created by a fiscal deficit must take into account the level of inflation, unemployment, or full employment economic conditions (Kryeziu and Hoxha, 2021). The tendency for a positive impact of fiscal deficits on economic growth in ASEAN-3 countries only occurs in a few periods, so the GMM estimation results show insignificant results.

Determining a threshold for the ratio of fiscal deficit to GDP is very necessary for fiscal deficit management to achieve short-term and long-term economic growth, with a threshold of at least 5% > deficit < 6% (Aero & Ogundipe, 2018). Orthodoxically, the government should increase tax collection and the tax base in financial management (Gyasi, 2020).

However, the role of taxes in orthodox and heterodox MMT is different, even though both have a positive impact on the economy.

The tax instrument in the research shows GMM estimation results that are not by the research. The role of taxes based on the MMT thinking framework is expected to be able to regulate the inflation rate. However, it turns out that the level of tax revenue has an insignificant negative relationship with GDP per capita growth. According to several empirical study results, tax instruments to control inflation in MMT will be difficult to find, especially in developing countries such as ASEAN-3. The results of an empirical study by Baker and Murphy (2020) show that the amount of tax cannot be changed in a short time because it is related to political and economic conditions.

Determining tax levels to control inflation can be done if the socio-economic and political conditions and quality of the country concerned are taken into account (Edwards, 2019). The chaotic political conditions in ASEAN-3 countries during the 1997–1998 crisis made it difficult to maintain public trust in the government when implementing fiscal policy. The role of taxes in Lerner's financial principles by emphasizing the endogeneity of money and sovereign currency cannot be implemented in all countries, especially in developing countries (Xing, 2019).

Economic conditions, which tend to weaken orthodoxically, would require an increase in revenue through taxes, but based on the MMT thinking framework, it would require an increase in government spending (injection). The government's injection efforts, which create high fiscal deficits, require the role of debt in its financing. The GMM estimation results show that government debt has an insignificant negative influence on GDP per capita growth. According to Vernengo and Caldentey (2019), developing countries will find it difficult to implement MMT because the level of debt they have tends to depend on foreign debt. So, later, you will be faced with balance-of-payments problems. Suppose developing countries such as Indonesia, Malaysia, and the Philippines implement the MMT policy of regulating the inflation rate using taxes. In that case, these ASEAN-3 countries must use domestic currency for every economic transaction.

The use of domestic currency in every economic transaction is not easy to implement, especially in developing countries. However, one form of using domestic currency is deficit financing through public debt. The existence of public debt in the MMT thinking framework is expected to stimulate the economy and increase GDP per capita. Public debt as deficit financing, which tends to increase, will increase economic growth in the short term, but in the long term, it will increase total returns (Folorunso, 2013). The government needs to increase tax revenues to be able to repay the large domestic debt and interest rates that have been promised. The right mix of domestic and foreign debt is very necessary in deficit financing management.

The condition of the fiscal deficit, which tends to increase, heterodoxically indicates the emergence of the public's precautionary motive. Savings patterns in crisis and post-crisis conditions in ASEAN-3 countries show an increase. This condition causes aggregate demand to decline and creates a higher fiscal deficit. Based on an orthodox framework of thinking, domestic savings will encourage economic growth through financing, which in turn can encourage investment in the productive sector. In contrast to the heterodox MMT thinking framework, sluggish economic conditions indicate a high level of savings, which will encourage economic growth by increasing the fiscal deficit. The GMM estimation results show a significant positive relationship which is by the MMT thinking framework. A high level of domestic savings will increase capital, production activities, and employment (Ribaj and Mexhuani, 2021). The orthodox relationship between savings and investment has a positive relationship because, based on Keynesian theory, savings will create investment, which can then encourage economic growth through the productive sector. In developing countries, domestic savings are needed to increase innovation (Aghion et al., 2016). Banking will finance projects that can attract investment.

The relationship between investment and GDP per capita growth shows an insignificant negative impact, which does not follow the MMT thinking framework. Public investment in the MMT framework is expected to encourage economic growth. The negative impact of public investment on economic growth can occur in the long term due to crowding out (Nguyen & Trinh, 2018). Public trust in the government or the political conditions of a country has an important role in influencing the level of investment, especially public investment (Wardhono et al., 2020; Ocolișanu et al., 2022). The political conditions of the ASEAN-3 countries during the 1997–1998 monetary economic crisis, which showed upheaval, were a strong reason why investment variables hurt GDP per capita growth.

Increasing capital based on the MMT thinking framework through injection will increase the money supply (M2). The GMM estimation results show an insignificant negative relationship. Based on MMT, injection efforts cause an increase in the money supply (M2), which aims to revive the economy to reach full employment, which will create inflation. The GMM estimation results from M2 show a relationship that is following MMT, where there is a negative relationship between the money supply and economic growth. Growth in the money supply will have a positive impact on the economy in the short term and a negative impact in the long term because prices will increase as a result of the economy moving back to its original point

(García Matres and Viet Le, 2021). One of the causes of the negative impact of M2 on GDP per capita growth could occur because the growth in the money supply (M2) is not accompanied by improving economic conditions (Omodero, 2019).

The amount of money in circulation is closely related to inflation. If the money supply increases due to price increases in the sluggish real sector, then inflation will increase (Wardhono et al., 2021). Based on the GMM estimation results, inflation has a significant negative relationship with GDP per capita growth. This condition shows conformity with the MMT thinking framework, which seeks to suppress inflation to achieve full employment conditions. The lower level of taxes than debt in ASEAN-3 countries shows that taxes cannot create price stability. The government's efforts to inject will cause an increase in prices and then inflation. If inflation is in conditions that exceed reasonable limits, then inflation will cause the economy to decline (Ekinci et al., 2020). A high level of inflation that is not accompanied by an increase in real wages means that inflation can reduce the level of the economy (Edwards, 2019).

Based on the GMM estimation results in ASEAN-3, there are only 2 variables that have a significant effect on GDP per capita growth, according to the MMT thinking framework. The behavior of fiscal variables based on GMM estimation results shows a tendency that the MMT thinking framework is not found. The positive influence of domestic savings on GDP per capita growth follows Sollow's theory of economic growth, while the inflation variable shows the impact of inflation on economic growth.

IV. CONCLUSION

The results of econometric calculations using GMM estimation show that there are only two variables that are significant to economic growth, namely domestic savings and inflation. Meanwhile, the other variables are not significant. These results occurred due to the influence of other variables outside the model. The behavior of fiscal variables in ASEAN-3 cannot be said to be following modern monetary theory, as evidenced by the relatively small number of conforming variables. The economic, political, and social conditions in ASEAN-3 countries are not yet suitable for implementing the MMT thinking framework (E. Tymoigne, 2021).

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