

Bilateral Trade and Monetary Regime: Analysis for ASEAN-5 Countries and their Main Trading Partners

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ABSTRACT

This study analyzes the impact of the choice of monetary regimes, namely the inflation targeting (IT) and exchange rate targeting (ERT) on the behavior of bilateral trade in ASEAN-5 Countries and their main trading partners in Asia Pacific. By utilizing the augmented gravity panel model, the study also considers the effects of distance, national income, exchange rates, common language and dummy intra-ASEAN trade on trade activities. The results showed that countries which implement an inflation targeting regime tend to have greater trade values compared to countries that implement an exchange rate targeting regime. The negative effects on bilateral trade are seen to be contributed by the variable of distance, exchange rate, common language and intra-ASEAN trade. While the income variable has a positive and significant effect on the trade.

Keywords—bilateral trade, monetary regime, inflation targeting, exchange rate targeting, gravity model

1. INTRODUCTION

Monetary policy is a policy type which can be applied as a foundation for designing a country's economic strategy (Mishkin, 1999). It is one of the most important "tools" of a country in carrying out economic activities and achieving the ultimate goal of economic development (Friedman, 1968; Clarida et al., 1999). It has the responsibility to manage the amount and growth rate of money supply in an economy. In the current global economy, monetary policy is often applied by many countries to support other main determinant factors of development process. One such factor is international trade (Clark, 1973; Nicita, 2013). For developed and developing countries, foreign trade activities are closely related to expanding domestic product market access and accelerating knowledge transfer among countries. Naturally, foreign trade provides two things for the process of accelerating economic growth, namely the income contribution from foreign exchange rates and the expansion of product markets (Dunning, 2000; Obadan, 2004). The classic impact of this fact can be seen from the proportion of international transactions or trade which tends to be increasingly significant in the aggregate output of countries with open economic system (World Bank, 2000).

Bacchetta and Van Wincoop (2000) examined the crucial role of monetary policy in trade aspects, especially the fact that the choice of a floating exchange rate regime is considered to be more flexible in responding to shocks which appears to have a significant effect on trade, while a fixed exchange rate regime does not affect bilateral trade between countries. Economists and policy planners recommend three nominal variables which can be used as anchors in the monetary policy framework, and at the same time are assumed to be able to support the development of trade

transaction values, namely the exchange rate, inflation, and monetary aggregates (Stone and Bhundia, 2004). In its evolution, the study of the effects of exchange rate variables on trade was noted to be more dominated by empirical studies, compared to studies of the effects of two other nominal variables (see Rose, 2000; Rose and van Wincoop, 2001; Frankel and Rose, 2002; Glick and Rose, 2002; Klein and Shambaugh, 2006; Adam and Cobham, 2007). Some of those studies even present findings about a strong positive relationship between the use of common currency and trading.

The recent inflation targeting (IT) regime, which is widely applied as an alternative to the exchange rate targeting (ERT) regime within the monetary policy framework, is also associated with trading activities. Studies on the relationship between inflation and international trade can be grouped into two schools. First, it is the school which studies the inflation impact to trade by utilizing a logical flow from the cash-in-advance model (see Stockman, 1985; Roldos, 1992; and Chuang et al., 2005). The cash-in-advance model considers inflation as a tax based on decisions to hold money intended for consumption and investment activities. The emergence of additional expenditure on tax equivalent costs (which can further reduce the supply of labor and investment) can cause inflation which is then believed to be able to change the pattern and volume of trade between countries, by taking into account the trade patterns in previous periods and the character of the production function of related sectors. Second, school which identify the relationship between inflation and trade through price and cost uncertainty. Studies based on this school's concepts and thoughts include Sandmo (1971), Clark (1973), Hooper and Kohlhagen (1978), Viaene and Zilcha (1998), and Dalal and Raju (2003). In general, supporters of the second school assume that the negative relationship between production and the uncertainty of prices and costs is a necessity. Countries

which have high price level volatility conditions will become a less attractive market for foreign exporters or traders. In addition, the cost uncertainty factor which triggers domestic price volatility will also have a negative impact on the ability and desire to produce, and trade from domestic exporters. Cordero (2008) explained that countries which implement inflation target regimes will tolerate higher inflation targets to avoid excessive exchange rate appreciation. He also emphasized that in the long run, countries implementing a monetary exchange rate target regime will experience a stable market balance if the nominal wage rate is flexible enough and the central bank keeps the exchange rate competitive. Whereas under the inflation target regime, long-term equilibrium will be stable if the nominal wage level is flexible enough to accommodate the superior productivity of knowledge.

This study analyzes the impact of the choice of monetary regimes, namely the inflation targeting and exchange rate targeting on the behavior of bilateral trade in ASEAN-5 Countries and their Main Trading Partners. The results showed that countries which implement an inflation targeting regime tend to have a greater trade values compared to countries that implement an exchange rate targeting regime. The negative effects on bilateral trade are seen to be contributed by the variable of distance, exchange rate, common language and intra ASEAN trade. While the income variable has a positive and significant effect on the trade.

2. LITERATURE REVIEW

2.1. *Monetary Regime*

The term "regime" generally means a government form or system which can be interpreted as a framework of government policy. Stone and Bundia (2004) classify monetary regimes into seven models. They are monetary non-autonomy, weak anchor, money anchor, peg exchange rates, full-fledged inflation targeting, implicit price stability anchor and inflation targeting lite. The implementation of changing the monetary regime is not easy. The change is very conditional in accordance with the obstacles occurring in a country. There are four applicable models in the change of monetary regime due to uncertain conditions in a country. The first one is monetary autonomy. Monetary autonomy is a decision form in terms of choosing a monetary regime where the decision is oriented towards a central bank which has public trust. The second model is inflation targeting lite or strong nominal anchor. This model allows changes in the monetary regime with three regime choices, namely the exchange rate peg, full-fledged inflation targeting and implicit price stability anchor. The third model is the exchange rate or strong inflation anchor, meaning that the monetary regime is oriented to the exchange rate targeting and inflation rate targeting as nominal anchors. Most countries in the world follow the third regime model. Yet, developing countries require high vigilance if they want to adhere to one of these two regimes, either exchange rate targeting or inflation rate targeting. It is because the concept of exchange rate targeting can only be applied by countries whose currency values are strong in the world. As for

developing countries, implementing an exchange rate targeting regime is an inaccurate measure since the exchange rates in developing countries are still relatively vulnerable to the dominant exchange rates in the world. The fourth monetary regime model is a full-fledged inflation targeting or implicit price stability anchor. The purpose of regime model is that the accuracy of inflation target phase can be ensured. The phase here also means that the state is able to take implicit price stability anchor actions, i.e. the state has a nominal anchor in the form of implicit price stability. The peg exchange rate regime in the monetary policy framework leads to the ERT concept or Exchange Rate Targeting, and the full-fledged inflation targeting leads to IT or Inflation Targeting. The concept of inflation targeting is quite widely adopted by countries in the world because it is considered to have clarity and accuracy in measuring the target monetary policy framework. Indonesia is one of the countries adopting inflation targeting (IT) as a target for monetary policy.

2.2. *Inflation Targeting*

The term of Inflation Targeting (IT) or often called Inflation Targeting Framework (ITF) is referred by Bernanke and Mishkin (1997) as a part of monetary policy strategy which is carried out through public announcements regarding the achievement of quantitative targets (the range of inflation) to be achieved in several periods going forward. In addition, their study also consider that ITF is a mean of communication to the public about plans and objectives of monetary policy. ITF as a new monetary policy framework was initially used by developed countries such as New Zealand, England, Canada, Sweden, and Australia in 1990 (Petursson, 2000). In its development, ITF increasingly gains attention from other countries facing problems in implementing monetary policy. ITF is believed to be able to help the central bank to achieve and maintain price stability by setting monetary policy targets explicitly based on certain inflation projections and targets. Therefore, ITF has been chosen to replace the old monetary regime, namely exchange rate targeting.

Bernanke and Mishkin (1997) considered that IT implementation requires attention especially to operational elements and communication issues so that the IT application can run in accordance with expectations. There are several things which need to be considered related to operational issues. They are determining the level of change in the price index that will be used as a target, setting a realistic inflation rate, setting an appropriate time, setting an inflation target in the form of a target point, gathering information that will be used in compiling policy, reviewing conditions which allow the deviation amongst the target, the inflation rate and the right timing when they want to implement IT.

2.3. *Exchange Rate Targeting*

According to Petursson (2000), the victorious Exchange Rate Targeting (ERT) regime was in the periods of 1970 until 1990 and was referred to the "formal anchor of monetary policy". However, the triumph of regime began to fade from year to year, until in 1997, the regime was transformed into

an Inflation Targeting regime. Roislan and Torvik (2004) explained the interesting reason for the transformation of ERT regime into IT. It is that ERT regime only tends to provide an overview and policy recommendations, whereas in the concept of open economy, output stability is required even though on a small scale. In its implementation, ERT has three models of monetary policy strategies. First, the value determination of domestic currency against certain commodities are universally recognized at the international level, such as gold. Second, the value determination of domestic currency against the currencies of developed countries tend to have low inflation. Third, the value adjustment of domestic currency against currencies in certain countries where currency changes are allowed provided that it is in line with the difference in inflation rates between the two countries.

The exchange rate system used by a country is not only limited to a fixed exchange rate system, but also a flexible exchange rate system. This is related to the globalization phenomenon of world economy, where the value of a country's currency is strongly influenced by the capital flow among countries and speculation activities. Countries which apply a fixed exchange rate system will be very vulnerable to capital flows and speculative activities. According to Taguchi (2011), the financial crisis that occurred in Asian countries (1997-1998) was actually closely related to exchange rate regulation. During the crisis period, the monetary regime implemented in Asian countries was an exchange rate regime. The exchange rate crisis has a negative effect on the country's economy. In addition to an increase in the price of domestic goods, the increasing foreign debt obligations worsen the balance sheet of domestic companies and banks. Therefore, ERT is transformed into IT since IT is considered to have a greater role in society regarding the transparency concept in inflation targets and developments.

2.4. Monetary Policy Regime and Bilateral Trade

Roislan and Torvik (2004) explained that the model of output fluctuations in trade and non-trade sectors depends on the regime implemented and developed by a country. They also described new insights about differences in the state of country's economy after a shock in country's economy when applying two different regimes, namely the exchange rate regime and the inflation targeting regime. The first difference is by looking at market price shocks, both in terms of supply and demand (demand shock and supply shock). Shock on both sides will shake the trade sector, especially sectors which have inflation targets below the figure set by the central bank, whereas economic shocks do not have a significant impact on sectors under the exchange rate target regime. Second, demand shock has an impact on the trade sector since the aggregate stability of output under the two monetary regimes is also shaken. However, the probability of demand shocks the total output under the inflation target regime is very large compared to the total output under the exchange rate regime. Moore and Williams (2008) clarified that the impact spread of nominal shocks under the exchange rate regime is slower than the inflation target regime.

3. EMPIRICAL METHODOLOGY

3.1 Data Sources

This research involved countries with unique characteristic in each form of monetary regime. The classification system of monetary policy regimes for all involved countries was adopted from the distribution system carried out by Wong and Chong (2014), where the countries were separated into two groups of monetary policy regimes, namely exchange rate targeting and inflation targeting. The countries used as research samples were five major countries in ASEAN (ASEAN-5) including Indonesia, Thailand, Malaysia, Singapore, and the Philippines, as well as five countries in Asia Pacific as the main trade partners of ASEAN-5 countries, namely Japan, China, South Korea, New Zealand and India. The type of data used in this study was secondary data obtained from related institutions such as the UN Comtrade, central banks of each sample country, the IMF, the World Bank and previous research from Rose and Spiegel (2011). The time period used in this study was annual, calculated from 1999 to 2014.

3.2. Empirical Models

This study used an extension of gravity model to investigate the effects of the monetary regimes choice, i.e. inflation targeting (IT) and exchange rate targeting (ET) on bilateral trade. This model can be explained as equation A, B, and C, as follows:

Model A

$$\text{LogTrade}_{i,j,t} = a_{10} + b_{11}\text{LogDist}_{i,j,t} + b_{12}\text{LogGDP}_{i,j,t} + b_{13}\text{LogEx.Rate}_{i,j,t} + b_{14}\text{IT}_{i,j,t} + b_{15}\text{ComLang}_{i,j,t} + \varepsilon 1_{i,j,t} \quad (1)$$

Model B

$$\text{LogTrade}_{i,j,t} = a_{20} + b_{21}\text{LogDist}_{i,j,t} + b_{22}\text{LogGDP}_{i,j,t} + b_{23}\text{LogEx.Rate}_{i,j,t} + b_{24}\text{IT}_{i,j,t} + b_{25}\text{ComLang}_{i,j,t} + b_{26}\text{LogEx.Rate}_{i,j,t}^2 + \varepsilon 2_{i,j,t} \quad (2)$$

Model C

$$\text{LogTrade}_{i,j,t} = a_{30} + b_{31}\text{LogDist}_{i,j,t} + b_{32}\text{LogGDP}_{i,j,t} + b_{33}\text{LogEx.Rate}_{i,j,t} + b_{34}\text{IT}_{i,j,t} + b_{35}\text{ComLang}_{i,j,t} + b_{36}\text{LogEx.Rate}_{i,j,t}^2 + b_{37}\text{IntraASEAN}_{i,j,t} + \varepsilon 3_{i,j,t} \quad (3)$$

The independent variables of the three models are distance (LogDist), income (LogGDP), exchange rate (LogEx.Rate), monetary regime (Inflation Targeting-IT), common language (ComLang), ASEAN membership for reporters and trading countries (IntraASEAN). The operational definition of variables in this research model can be seen in Table 1.

Table 1 Definition of Variables and Data Sources

Variabels	Definitions	Data Sources
$\text{LogTrade}_{i,j,t}$	Total trade value of country <i>i</i> related to country <i>j</i>	UNComtrade
$\text{LogDist}_{i,j,t}$	Distance between country <i>i</i> and country <i>j</i>	Rose and Spiegel's Dataset (2011), UNComtrade
$\text{LogGDP}_{i,j,t}$	The multiplication of real GDP (income) of two countries (<i>i</i> and <i>j</i>)	World Bank
$\text{LogEx.Rate}_{i,j,t}$	Bilateral exchange rates for country <i>i</i> and <i>j</i>	International Monetary Fund and International Financial Statistics
$\text{LogEx.Rate}^2_{i,j,t}$	Bilateral exchange rates for country <i>i</i> and <i>j</i> (after squared)	International Monetary Fund and International Financial Statistics
$\text{IT}_{i,j,t}$	Dummy for monetary regimes adopted by country <i>i</i> (1=IT/Inflation Targeting; 0=ERT/Exchange Rate Targeting)	The Central Bank of each country
$\text{ComLang}_{i,j,t}$	Dummy for language similarity between country <i>i</i> and <i>j</i> (1=country <i>i</i> and <i>j</i> have similar language; 0=otherwise)	Rose and Spiegel's Dataset (2011)
$\text{IntraASEAN}_{i,j,t}$	Dummy for ASEAN countries (1=country <i>i</i> and <i>j</i> are ASEAN countries; 0=otherwise)	Rose and Spiegel's Dataset (2011)

4. EMPIRICAL RESULTS AND DISCUSSION

This study used three panel model equations (Panel A, B and C) to estimate the value of bilateral trade among ASEAN-5 countries and their main trading partners in the Asia Pacific region. There were five independent variables in the equation, namely distance (LogDist), income (LogGDP), exchange rate (LogEx.Rate), monetary regime (Inflation Targeting-IT), common language (ComLang), and ASEAN membership for reporters and trading countries

(IntraASEAN). The first panel equation was Panel A, presented in the second column. The results of Panel A show that the choice of monetary policy (IT) had been proven to affect the value of bilateral trade among considered countries. From the research test results, it can be seen that countries which apply inflation targeting (IT) policies had higher values of bilateral trade compared to countries which implement exchange rate targeting (ERT) policies. This finding corroborates a study conducted by Wong and Chong (2016), which also found a positive impact of the application of the IT regime on the value of trade between countries.

Table 2 Estimated results of panel models

Variables	Models		
	Panel A	Panel B	Panel C
LogDist	-0.958*** (0.014)	-0.993*** (0.020)	-1.091*** (0.018)
LogGDP	0.097*** (0.005)	0.113*** (0.006)	0.097*** (0.006)
LogEx.Rate	-0.008** (0.002)	0.005*** (0.002)	0.006*** (0.002)
(LogEx.Rate) ²	-	-0.012*** (0.001)	-0.011*** (0.001)
IT	0.343** (0.110)	0.476** (0.104)	0.609** (0.090)
ComLang	-1.130*** (0.074)	-1.052*** (0.087)	-1.130*** (0.075)
IntraASEAN	-	-	-0.466*** (0.036)
N	1440	1440	1440
Adjusted R ²	0.632	0.582	0.564
<i>Diagnostic tests:</i>			
Autocorrelation	<i>passed</i>	<i>passed</i>	<i>passed</i>
Heteroscedasticity	<i>passed</i>	<i>passed</i>	<i>passed</i>
Multicollinearity	<i>passed</i>	<i>passed</i>	<i>passed</i>

Notes: Dependent Variable=LogTrade (Bilateral Trade Values); (*)=significant at 10%; (**) =significant at 5%; (***)=significant at 1%

The distance and income variables are the conventional variables in gravity models which provide an impact in accordance with previous studies, in which the relationship between distance (LogDist) and trade (LogTrade) is negative and significant, while the relationship between income (LogGDP) and trade (LogTrade) is positive and significant. This finding is in line with research conducted by Mele and Baistrocchi (2012) stating that the distance variable has a negative influence on bilateral trade and income (GDP) has a positive influence on bilateral trade activities.

Meanwhile, the exchange rate variable (LogEx.Rate) was found to have a negative effect on trade value (LogTrade). This situation indicates that when the exchange rate of the exporting country depreciates, the export level of the country (to partner countries) will decrease. This result advocates the study of Thuy and Thuy (2019), which confirms that depreciation of the exchange rate will reduce the value of a country's trade in the short term. Upadhyaya and Dhakal (1997) also explained a similar thing in which the depreciation of domestic exchange rate will increase import prices relative to exports, which can then worsen the trade balance.

Several previous studies found that the similarity factor between official or native languages among countries involved in trade activities is an important requirement in bilateral trade. From the test results above, it is known that the relationship between language similarity or common language (ComLang) with trade (LogTrade) was negative and significant in all three models. This showed that the similarity between official languages or native languages between countries involved in trade activities was no longer

an issue which supports the rising value of trade. In addition, trade activities in the ASEAN and Asia Pacific region were no longer co-opted with the term 'language barrier'. The issue of globalization forced trade players in the area to understand the language which was more frequently used in the association of world economic activity (e.g. english)

Furthermore, this study added a new independent variable to the Panel B equation, namely the (LogEx.Rate)² variable. The purpose of adding the independent variable was as a form of testing a non-linear relationship between the exchange rate and bilateral trade variables. The addition of independent variable was related to the J-curve. The idea of the J-curve was first introduced by Magee (1973) and then was empirically tested by Bahmani-Oskooee (1985). In the J-curve hypothesis, it was said that in the short run, depreciation of the exchange rate will depress exports and in the long run, the level of exports and the exchange rate will increase and achieved stability (Bahmani-Oskooee and Hegerty, 2010). The results of the Panel B model showed that the relationship between the exchange rate and the trade value were initially positive but after passing a certain threshold, the relationship became negative. This finding contrasted with the J-curve hypothesis and was also not in line with research conducted by Moura and Da Silva (2005) and Akorli (2017). Moura and Da Silva (2005) found a positive relationship between exports and the exchange rate only in the long term. On the other hand, Akorli (2017) did not find a significant relationship between trade variables and the exchange rate, both in the short and long term. However, other independent variables in the Panel B and Panel C models had a consistent impact on the dependent

variable. Distance (LogDist) and common language (ComLang) variables had a negative and significant relationship to trade values, while income (LogGDP) and dummy Inflation Targeting (IT) variables had a positive and significant relationship to values of bilateral trade.

In the Panel C model equation, there was a dummy variable, namely IntraASEAN. This variable was used to examine the effect of ASEAN membership in bilateral trade activities. From the results obtained, it can be concluded that intra-ASEAN trade was proved not to be an attractive choice among ASEAN members themselves during the study period. It also indicated that ASEAN membership could be utilized to optimize the trade value between ASEAN member countries. In other words, ASEAN members relatively tended to be more active in trading with countries outside ASEAN or other possibilities, Asia Pacific countries outside ASEAN had proven to very actively 'play' in the ASEAN market. Beyond the IntraASEAN variable, the Panel C model showed findings which were consistent with the Panel A and the Panel B model. Based on the conducted diagnostic tests, the three considered models appeared to be free from classic assumption problems, whereas the VIF Test was performed to detect multicollinearity, the Durbin-Watson test for the detection of autocorrelation problems and the White Test for the Heterokedasticity test.

5. CONCLUSION

This study analyzes the impact of the choice of monetary regimes, namely the inflation targeting and exchange rate targeting on the behavior of bilateral trade in ASEAN-5 countries and their main trading partners in Asia Pacific (i.e. China, Japan, Korea, India and New Zealand). The method used was a augmented gravity model by utilizing three types of panel models, namely Panel A, B and C. Based on the results, it was obtained that countries with inflation targeting regime tend to have greater bilateral trade values when compared with countries implementing exchange rate targeting regime. The relationship between GDP (income) and bilateral trade is positive. A positive relationship is also achieved by the exchange rate and trade values at the initial stage, but the positive relationship will change to negative after passing a certain limit (period). This contradicts the J curve hypothesis. Common language variables have a negative and significant effect on bilateral trade, indicating that there is no "language barrier" effect found in the case. Intra-ASEAN trade proves to be an unattractive choice among ASEAN-5 countries. During the period of study, ASEAN-5 countries relatively tend to be more active in trading with countries outside ASEAN.

REFERENCES

[1] C. Adam and D. Cobham, Exchange rate regimes and trade, vol. 75, Manchester : University of Manchester, 2007, pp. 44-63.

[2] E. Akorli, The Effects of Exchange Rates on Trade Balance in Ghana, Germany : University Library of Munich, 2017.

[3] P. Bacchetta and E. van Wincoop, "Does exchange-rate stability increase trade and welfare," *American Economic Review*, vol. 90, pp. 1093-1109, 2000.

[4] M. Bahmani-Oskooee, "Devaluation and the J-Curve: some evidence from LDCs, *The Review of Economics and Statistics*, vol. 67, pp. 500-505, 1985.

[5] M. Bahmani-Oskoe and S. Hegerty, "The J- and S-curves: a survey of the recent literature," *Journal of Economic Studies*, vol. 37, pp. 580-596, 2010.

[6] B. S. Bernanke and F. S. Mishkin, *Inflation targeting: a new framework for monetary policy?*, Cambridge : National Buereau of Economic Research, 1997.

[7] R. Clarida, J. Galí and M. Gertler, "The science of monetary policy: a new keynesian perspective," *Journal of Economic Literature*, vol. 37, pp. 1661-1707, 1999.

[8] P. B. Clark, "Uncertainty, exchange risk, and the level of international trade," *Economic Inquiry*, vol. 11, pp. 302-13, 1973.

[9] S. Chuang, T. F. Huo and P. S. Lin, "Inflation and pattern of trade in a dynamic specific-factors model with money," *Macroeconomic Dynamics*, vol. 9, pp. 358-371, 2005.

[10] J. A. Cordero, "Economic growth under alternative monetary regimes: inflation targeting vs real exchange rate targeting," *International Review of Applied Economics*, vol. 22, pp. 145-160, 2008.

[11] A. J. Dalal and S. S. Raju, "Domestic and foreign sales when prices in both markets are uncertain," *Buletin of Economic Research*, vol. 55, pp. 125-148, 2003.

[12] J. H. Dunning, "The eclectic paradigm as an envelope for economic and business theories of MNE activity. *International Business Review*, vol. 9, pp. 163-90, 2000.

[13] J. Frankel and A. K. Rose, "An estimate of the effect of common currencies on trade and income," *The Quarterly Journal of Economics*, vol. 117, pp. 437-466, 2002.

[14] M. Friedman, "The role of monetary policy," *American Economic Review*, vol. 58, pp. 1-17, 1968.

[15] R. Glick and A. Rose, "Does a currency union affect trade? The time-series evidence," *European Economic Review*, vol. 46, pp. 1125-1151, 2002.

[16] P. Hooper and S. W. Kohlhagen, "The effect of exchange rate uncertainty on the prices and volume of

international trade,” *Journal of International Economics*, vol. 8, pp. 483-511, 1978.

[17] M. W. Klein and J. C. Shambaugh, “Fixed exchange rates and trade,” *Journal of International Economics*, vol. 70, pp. 359-383, 2006.

[18] S. P. Magee, “Currency contracts, pass-through and devaluation,” *Brookings Paper of Economic Activity*, vol. 4, pp. 303-325, 1973.

[19] M. Mele and P. Baistrocchi, “A critique of the Gravitational Model in estimating the determinants of trade flows,” *International Journal of Business and Commerce*, vol. 2, pp. 12-23, 1973.

[20] F. S. Mishkin, “International experiences with different monetary policy regimes,” *Journal of Monetary Economics*, vol. 43, pp. 576-606, June 1999.

[21] W. Moore and M. Williams, “Evidence on the sectoral monetary transmission process under a fixed exchange rate regime,” *International Economic Journal*, vol. 22, pp. 387-398, 2008.

[22] G. Moura and S. Da Silva, “Is there a Brazilian J-curve?,” *Economics Bulletin*, vol. 6, pp. 1-17, 2005.

[23] A. Nicita, “Exchange rates, international trade and trade policies,” *International Economics*, vol. 135-136, pp. 47-61, 2013.

[24] M. I. Obadan, *Foreign capital flows and external debt: perspectives on Nigeria and the LDCs Group*, Lagos : Broadway Press Limited, 2004.

[25] T. G. Pétursson, “Exchange rate or inflation targeting in monetary policy?,” *Monetary Bulletin*, vol. 1, pp. 36-45, 2000.

[26] O. Roisland and R. Torvik, “Exchange rate versus inflation: a theory of output fluctuations in traded and non-traded sectors,” *Journal of International Trade and Economic Development*, vol. 13, pp. 265-285, 2004.

[27] J. E. Roldos, “A dynamic specific-factors model with money,” *The Canadian Journal of Economics*, vol. 25, pp. 729-742, 1992.

[28] A. Rose, “One money, one market: the effect of common currencies on trade,” *Economic Policy*, vol. 15, pp. 6-45, 2000.

[29] A. Rose and M. Spiegel, “The olympic effect,” *The Economic Journal*, vol. 121, pp. 652-677, 2011.

[30] A. Rose and E. van Wincoop, “National money as a barrier to international trade: the real case for currency union,” *American Economic Review*, vol. 91, pp. 386-390, 2001.

[31] A. Sandmo, “On the theory of the competitive firm under price uncertainty,” *American Economic Review*, vol. 61, pp. 65-73, 1971.

[32] A. Stockman, “Effects of inflation on the pattern of international trade,” *The Canadian Journal of Economics*, vol. 18, pp. 587-601, 1985.

[33] M. R. Stone and A. J. Bhundia, *A new taxonomy of monetary regimes*, Washington D. C : International Monetary Fund, 2004.

[34] H. Taguchi, “Currency regime and monetary autonomy. Empirical evidence using recent and global data from 1990 to 2007,” *International Economic Journal*, vol. 25, pp. 341-358, 2011.

[35] V. Thuy and D. Thuy, “The impact of exchange rate volatility on exports in vietnam: a bounds testing approach,” *Journal of Risk and Financial Management*, vol. 12, pp. 1-14, 2019.

[36] K. P. Upadhyaya and D. Dhakal, “Devaluation and the trade balance: estimating the long run effect,” *Applied Economics Letter*, vol. 4, pp. 343-345, 1997.

[37] J. M. Viaene and I. Zilcha, “The behavior of competitive exporting firms under multiple uncertainty,” *International Economics Review*, vol. 39, pp. 591-609, 1998.

[38] K. M. Wong and T. T. L. Chong, *A tale of two regimes: classifying and revisiting the monetary policy regimes*, Hong Kong : The Chinese University of Hong Kong, 2014

[39] K. M. Wong and T. T. L. Chong, “Does monetary policy matter for trade?” *International Economics*, vol. 147, pp. 107-125, 2016.

[40] World Bank, *Trade Blocs*, Washington D.C: The World Bank, 2000.