The Impact of Macroeconomic Factors on Current Account Deficit in ASEAN Countries

Zuriyati Ahmad (Corresponding author)

Faculty of Business and Management

Universiti Teknologi MARA, Cawangan Terengganu, Malaysia

E-mail: zuriy271@uitm.edu.my

Nor Aziela Jafre

Averis Sdn Bhd, Wisma Averis, Level 5, Tower 2, Avenue 5

Bangsar South, Kuala Lumpur, Malaysia

E-mail: azielaeyla@gmail.com

Wan Norsyakila Wan Kamarudin

School of Business, University of Wollongong, Glenmarie Campus, Shah Alam, Malaysia

E-mail: norsyakila.k@uow.edu.my

Abstract

In most ASEAN nations, a deficit in the current account balance began in 2018, sparking concerns among these countries. The deficit in the current account has led to various disadvantages in ASEAN countries, harming the nation's economic health. Therefore, this paper analyzes the macroeconomic factors influencing the current account deficit in selected ASEAN countries. Data from eight ASEAN countries were analyzed using a panel static approach. Findings reveal that exchange rate (ER), Term of trade (TOT) and interest rate (IR) are the main factors that influence the deterioration of current account balances. Meanwhile, money supply (MS), and oil price (OILP) showed insignificant relationships towards current account balances. As ER, IR and TOT influence the current account significantly, it is suggested that the authorities in ASEAN countries have policy reforms and macroeconomic

adjustments accordingly to improve the current account deterioration.

1. Introduction

The current account can be defined as the sum of the balance of trade which can be viewed as an important indicator of a country's economic health and the stability of growth for a nation (Aristovnik, 2006). ASEAN countries' conditions depend on how each country shaped its trading performance. Nevertheless, a negative balance in their trade activities and foreign reserves will result in the current account deficit. This situation highlighted that the country is importing more than it is exporting, leading to a depletion of foreign assets. The imbalance in the current account of ASEAN countries is influenced by various factors, including the drivers of their economy, domestic private expenditures, and the implementation of policies and infrastructure projects.

The economic theory states that whether a deficit is good or bad depends on the factors that rise to that deficit. However, economic theory also highlights what to look for in assessing the desirability of a deficit (Ghosh & Ramakrishnan, 2006). The shrinking of the current account to 1.8% of GDP in 2019 from 2.75% of GDP in 2015 was due to higher investment in Southeast Asia (Ng, 2018). Investment in Southeast Asia has been rising in 2018 and 2019 and 39% of respondents in the ASEAN Financial Forum have agreed that Asia has the best investment prospects (Lee, 2019). If a country attracts more financial flows than others, the financial account will increase and thus it will lead to a higher deficit in the current account (Pettinger, 2017). Even though the deficit of the current account is sometimes desirable, the unexpected rise in the current account deficit beyond historical standards has received substantial attention in recent years.

The ASEAN countries such as Malaysia, Singapore, Indonesia and Thailand have experienced a current account surplus of an average of 6.4 % of GDP in 2000–2009, making them one of the world's largest lenders (Das, 2016). However, in recent years the current account condition in some of the ASEAN countries has experienced a continuous deficit. According to ICAEW (2019), the weakness in global economic activity in 2018 has spilled into 2019 and affects the current accounts of ASEAN countries. Malaysia for example has experienced a current account deficit starting in 2017 due to the impact of oil price volatility. Similarly, this is also the reason for the deficit in Indonesia's current account, and the Indonesian authorities have decided to implement policy reforms and economic adjustment (Indonesia Investments, 2015). The Philippines has had a current account deficit since 2015 due to the program implemented that encouraged import activities and also took measures similar to those in Indonesia. Meanwhile, the deficit occurs in Cambodia due to higher import costs for raw materials and oil products leading to higher export costs (Coface Trade, 2019). Against this background, this paper aims to analyze the impact of macroeconomic factors on the current account deficit in selected ASEAN countries.

The remainder of the paper is organized as follows. Section 2 discusses the literature review. The methodology under consideration will be highlighted in section 3. Section 4 discusses the

results and discussion. Lastly, section 5 offers conclusions.

2. Literature Review

Theoretically, two basic views can explain the origin of the current account imbalance. The first view deems imbalance as an oscillating trend, better termed as the 'disequilibrium approach.' (Das, 2016). The second view equilibrium approach is the situation in which the change in determinants can be self-sustaining. In support of the theory, substantial empirical works have been found on the determinants of current account deficit. According to the Mundell-Flemming approach of conventional hypothesis, the exchange rate can influence the current account. When the exchange rate increases or an appreciation of the exchange rate reduces the value of exports and causes a trade balance deficit, it increases or decreases the current account deficit. Empirically, in-depth studies have been done by Astuti, Oktavilia and Rahman (2015), Das (2016), Purwono, Mucha, and Mubin (2018), and Sahoor et al. (2022). These studies showed that the exchange rate negatively influences the current account deficit. A higher exchange rate will decrease the country's savings as people tend to import more goods due to the cheaper price. Therefore, it will result in lower savings which then results in the current account deficit. Meanwhile, Garg and Prabheesh (2017) found that a real effective exchange rate has a negative effect in the short run but it is not significant.

Money supply was found to have a positive relationship with the current account (Olateju & Danmola, 2013; Oshota and Badejo, 2015; and Yigitbas, 2017). An increase in money supply will increase industries' productivity and encourage export activity, resulting in a current account surplus. Yigitbas (2017) claimed that the deficit occurring in Turkey resulted from low savings and limited money supply from the government. A higher money supply helps the country allocate financial resources effectively, resulting in lower precautionary savings. On the contrary, when tested using a panel analysis method, Qiong and Rui (2013) and Ousseini, Hu, and Aboubacar (2017) indicate a negative relationship between money supply and current account. Ousseini et al. (2017) supported the previous findings by revealing that higher money supply will lead to inflation which will increase the export cost and deteriorate the current account.

Earlier works on the relationship between the term of trade (TOT) and current account have been done by Sadiku et al. (2015) and Destaings (2017). A negative relationship is found and revealed that improvement in terms of trade means that export price is higher, leading to a decline in real income and export revenue which tends to deteriorate the current account due to lower savings. However, Ozdamar (2016), Sahoor et al. (2022) and Sumiyati (2022) have found a positive relationship between the term of trade (TOT) and the current account. Higher terms of trade will lead to higher consumption due to lower prices of imported goods or services. In the long run, TOT will increase the current account as the imported goods will be used to produce and export high-tech intensive products. When there is a higher term of trade volatility, the country will take an initiative plan by inducing more precautionary saving and lowering the investment thus resulting in a current account surplus.

Huntington (2015), Basarir and Ercakar (2016), and Bayraktar, Egri, and Yildiz (2016) claimed that a decline in oil prices will improve the current account as it will provide cheap

energy and reduce costs to help the country make a more productive investment for benefit of the current account in long term period. A positive significant influence between oil prices and the current account has been found by Mucuk, Ay, and Gerceker (2013), Yurdakul and Cevher (2015) and Longe, Adelokun (2018) and Sahoor et al. (2022). Mucuk et al. (2013) for example claim that a decrease in international oil price will lead to higher demand as the price to import is cheaper for oil-importing countries and tends to change the structure of production in the nation and deteriorate its current account. Nonetheless, an insignificant relationship was revealed by Insel and Kayik ġi (2013). It is justified that the current account was influenced more by investment factors and is not significant in a short-term period.

Ozdamar (2016) and Hassan (2019) revealed that there is a positive relationship between interest rates and current accounts. The fall of interest rate in the nation has led to a high demand for financing, increasing consumer consumption and import activities and widening the current account deficit. On the contrary, Homaifar and Salimullah (2016) stated that the current account will be a deficit if there is an increase in T-bills interest rate. Higher production costs will result from the increasing interest rate, leading to limited producers or suppliers in a nation. Therefore, people will have to import goods and services abroad, worsening the current account deficit

3. Methodology

This paper examines the impact of macroeconomic factors on the current account deficit in eight (8) selected ASEAN countries. These countries include Malaysia, Indonesia, Vietnam, Philippines, Cambodia, Myanmar, Singapore, and Laos. Following the model by Sadiku et al. (2015), Ozdamar (2016), Destaings (2017), Sahoor et al. (2022) and Sumiyati (2022), this study delves into the macroeconomic factors influence the current account (CA). Therefore, the estimation model has been formulated as follows:

$$CA_{it} = \alpha_o + \beta_1 ER_{i,} + \beta_2 MS_{i,t} + \beta_3 TOT_{i,t} + \beta_4 OILP_{i,t} + \beta_5 IR_{i,t} + \varepsilon \qquad (1)$$

Where CA represents the current account, ER and MS indicate the exchange rate and money supply. TOT represents the term of trade, OILP for oil price and IR for interest rate. The model also includes ε as the error term, i as sample units of panel and t stands for the time period of the sample.

The panel data estimation technique is utilized for analysis. The panel data model has the advantage of handling data limitations and controlling heterogeneity among variables. Moreover, this estimation technique is appropriate to test more complex behavioral models.

Three models of panel static are tested to obtain the final result. These include the Pooled Ordinary Least Square Model (POLS), the Random Effect Model (REM) and the Fixed Effect Model (FEM). The equation of Pooled Ordinary Least Square is shown as follows;

$$Y_{i,t} = \alpha + \beta_1 X_{i,t} + \varepsilon_{i,t} \qquad (2)$$

The Random Effect Model takes the equation of;

$$Y_{i,t} = \alpha + \beta_1 X_{i,t} + (\varepsilon_{i,t} + \mu_{i,t}) \qquad (3)$$

When testing whether to choose the Pooled Ordinary Least Square Model or the Random Effect Model the Breusch Pagan Lagrangian multiplier test was applied. The hypothesis is set as follows;

H_0: Choose Pooled Ordinary Least Square Model

H_1: Choose Random Effect Model

If the probability of Chi^2 is less than 0.05, the H_0 is rejected and the random effect model (REM) is used. The study can be further developed using the Fixed Effect Model (FEM) as follows;

$$Y_{i,t} = \alpha_i + \beta_1 X_{i,t} + \varepsilon_{i,t} \tag{4}$$

The analysis can proceed to decide on the model of Random Effect Model or Fixed Effect Model using of Hausman Fixed Test is applied. The hypothesis of the Hausman Fixed Test is;

H_0: Choose a Random Effect Model

H_1: Choose a Fixed Effect Model

In choosing the Fixed Effect Model or the Hausman Fixed Test, the Chi^2 should be less than 0.05 which indicates that H_1 is accepted and the analysis can proceed to the Fixed Effect Model.

4. Result and Discussion

A series of diagnostic tests are conducted to ensure the robustness of the result. The Variance Inflation Factor (VIF) is carried out to confirm the existence of a multicollinearity problem. Multicollinearity statistics are a reliable measure to calculate the validity of the regression analysis. The Variance Inflation Factor (VIF) and the tolerance level are calculated in Table 1.

Table 1. Variance Inflation Factor

Variable	VIF	1/VIF
ER	3.30	0.3020
MS	2.41	0.4144
TOT	2.06	0.4856
OP	1.92	0.5212
IR	1.0	0.9951
Mean VIF	2.14	

The study follows Gujarati (2007) in ensuring the validity of the analysis, which stated that the VIF value should be under 5 and the 1/VIF value should be nearer to zero. The mean VIF is found to be 2.14, which is less than the 5 threshold. Therefore, this condition has been met and the result indicates the absence of multicollinearity in the regression analysis.

Another diagnostic test is on the problem of heteroscedasticity which exists when the error term size is distinct across the values of the independent variable. The Breusch Pagan or

Cook-Weisberg test is applied to ensure the problem does not exist. The result obtained show that Chi^2 (1) = 11.57, Prob > chi2 = 0.0007. The probability value is lower than 0.01; therefore, the result has a heteroscedasticity problem. However, following Stock and Warson (2008), the heteroscedasticity problem can be dealt with using the heteroscedasticity robust standard error method.

After the series of tests, the results can be obtained to determine the model. To choose, which model is estimated the best, the Breusch Pagan test is used to test which of the Pooled OLS (POLS) and Random Effect Model (REM) is more appropriate. Meanwhile, the Hausman test is used to test for the more appropriate model between REM and the Fixed Effect Model (FEM). It is found that the validity of the result is more convenient to REM, thus the results will be analyzed based on this model (Table 2).

Table 2. Random Effect Model

Variable	Coef	Z	P>|z|
ER	-0.0035	-2.30	0.022
MS	-0.0070	-0.92	0.357
TOT	0.0007	2.50	0.013
OILP	0.0001	1.07	0.286
IR	-0.0013	-2.60	0.009
C	-0.03232	-0.98	0.328

Based on the Random Effect Model in Table 2, the exchange rate (ER) as estimated has a negative relationship with a current account. The relationship is significant at a 5% alpha level of significance. An increase in the ER will lead to a reduction in the current account deficit as found in Astuti, Oktavilia, and Rahman (2015), Purwono, Mucha and Mubin (2018) and Sahoor et al. (2022). A higher exchange rate tends to reduce the cost of imports and will reduce the deficit of the current account.

Money supply (MS) is depicted as a negative sign which differs from the expected sign. The insignificant relationship in the finding indicates that changes in MS do not significantly impact on the current account. The finding is inconsistent with the previous studies (Qiong & Rui, 2013 and Ousseini et al., 2017), which implies that MS in the ASEAN countries has important consequences in domestic variables such as inflation and output but has less effect on international variables such as the current account.

A positive relationship is found between the term of trade (TOT) and the current account with a coefficient value 0.0007. The TOT is significant at a 0.01 level of significance in influencing the current account. A higher TOT will lead to cheaper imports which will be used for production and stimulate export activities in the future. Therefore, higher exports indicate that a country enjoys a current account surplus. The finding is in parallel with Ozdamar (2016), Sahoor et al. (2022) and Sumiyati (2022). Higher term of trade will lead to higher consumption due to lower prices of imported goods or services. However, in the long run, it will increase the current account as the imported goods will be used to produce and

export high-tech intensive products. When there is a higher term of trade volatility, the country will take the initiative by inducing more precautionary saving and lowering the investment thus resulting in a current account surplus. TOT has positively impacted CA as certain countries will take the initiative to avoid the impact such as inducing more precautionary savings earlier. Therefore, when the TOT is higher, it will positively affect the current account.

Oil price (OILP) has resulted in a positive relationship with the current account (CA). The relationship between OILP and CA depends on ASEAN countries' dependence on oil prices. The lower oil price has benefited those countries that depend on imported oil as it will lead to lower costs and widen the deficit of the current account. The changes in the oil price will impact the industry differently. Fluctuations in oil prices will mainly affect the transportation and logistics industry while other sectors will be less affected. Nonetheless, the relationship is found to be insignificant indicating that there is no meaningful relationship.

The interest rate (IR) is found to have a positive relationship with CA. The interest rate shows a significant relationship at 0.01 confidence level. The finding however is inconsistent with previous studies such as Ozdamar (2016) and Hassan (2019). Higher costs will lead to a lack of suppliers in the nation and tend to encourage ASEAN consumers to find suppliers from overseas, increasing imports and reducing the current account.

5. Conclusion

This paper examines the macroeconomic factors that impact the current account deterioration in eight selected ASEAN countries. The results indicate that the exchange rate (ER) and interest rate (IR) have a significant negative relationship with the current account (CA). At the same time, the term of trade (TOT) is positively related to CA. Consequently, it can be inferred that macroeconomic indicators like ER and IR substantially influence the capital account (CA), with IR displaying the highest significance level. Therefore, changes in IR can substantially affect the CA in ASEAN countries, emphasizing the importance of carefully adjusting domestic interest rates to stimulate economic investment and production. On the other hand, it was observed that neither money supply (MS) nor oil prices (OILP) significantly impact the CA. Hence, it is recommended that ASEAN countries closely monitor their macroeconomic indicators that influence the current account to maintain a healthy economic balance. Additionally, authorities in these countries are encouraged to implement policy reforms and macroeconomic adjustments to address the issues associated with current account deterioration.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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No additional data are available.

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References

Ang, H. Y., & Sek, S. K. (2011). Empirical Investigation on the Determinants of Current Account Balances. *International Journal of Advanced Computer Science, 1*(4), 146-151.

Aristovnik. (2006). Current Account Sustainability in Selected Transition Countries. *William Davidson Institute Working Paper, 844*. https://doi.org/10.2139/ssrn.943506

Astuti, I. P., Oktavilia, S., & Rahman, A. R. (2015). The International Balance of Payments Role in the Economy of Indonesia. *Journal of Economics and Policy, 8*(2), 173-183.

Basarir, C., & Ercakar, M. E. (2016). An Analysis of the Relationship between Crude Oil Prices, Current Account Deficit and Exchange Rates: Turkish Experiment. *International Journal of Economics and Finance, 8*(11), 48-59. https://doi.org/10.5539/ijef.v8n11p48

Bayraktar, Y., Egri, T., & Yildiz, F. (2016). A Casual Relationship Between Oil Prices Current Account Deficit, and Economic Growth: An Empirical Analysis from Fragile Five Countries. *EcoForum, 5*(1), 29-43.

Coface Trade. (2019). *Economic Studies and Country Risk.* [Online] Available: https://m.coface.com/Economic-Studies-and-Country-Risks/Cambodia

Das, D. K. (2016). Determinants of Current Account Imbalance in the Global Economy: A Dynamic Panel Analysis. *Journal of Economic Structures, 5*(8), 1-24.

https://doi.org/10.1186/s40008-016-0039-6

Destaings, N. N. (2017). Dynamics of Current Account Deficit: A Kenyan Experience. *International Journal of Innovative Research and Development, 6*(4), 90-111. https://doi.org/10.24940/ijird/2017/v6/i4/APR17046

Ener, M., & Arica, F. (2012). The current account-interest rate relation: A panel data study for OECD countries. *Journal of Business Management and Economics, 3*(2), 048-054.

Garg, B., & Prabheesh, K. P. (2017). Drivers of India's Current Account Deficit, with Implications for Ameliorating Them. *Journal of Asian Economics, 51*, 23-32. https://doi.org/10.1016/j.asieco.2017.06.002

Ghosh, A., & Ramakrishnan, U. (2016). Do Current Account Deficits Matter? *Finance and Development, 43*(4), 44-45.

Hassan, K. (2019). Determinants of Current Account Deficit in Developing Countries: The Case of Bangladesh. *Studies in Business and Economics, 12*(1), 5-21. https://doi.org/10.29117/sbe.2006.0012

Homaifar, G. A., & Salimullah, A. M. (2016). Factors Affecting U.S. Current Account Deficit: An Empirical Evidence. *Journal of Economics and International Finance, 8*(9), 148-154. https://doi.org/10.5897/JEIF2016.0786

Huntington, H. G. (2015). Crude Oil Trade and Current Account Deficits. *Journal of Energy Economics, 50*(1), 70-79. https://doi.org/10.1016/j.eneco.2015.03.030

ICAEW. (2019). *Economic Update: South East Asia ICAEW Report.* [Online] Available: https://www.icaew.com/technical/economy/economic-insight/economic-insight-south-east-asia

Indonesia Investments. (2015). *Indonesia's Current Account Deficit Explained: Why, What, When and How.* [Online] Available: https://www.indonesia-investments.com/finance/financial-columns/indonesia-s-current-account-deficit-explained-why-what-when-how/item5731?

International Monetary Fund. (2015). *Consultation Press Release; Staff Report; And Statement by the Executive Director for Singapore.* https://doi.org/10.5089/9781513536057.002

Lee, G. (2019). *Southeast Asia seen as best investment destination this year, poll shows.* South China Morning Post. [Online] Available: https://www.google.com/amp/s/amp.scmp.com/business/companies/article/2182055/southeast-asia-seen-best-investment-destination-year-polls-shows

Longe, A. E., & Adelokun, O. O. (2018). The Current Account and Oil Price Fluctuations Nexus in Nigeria. *Journal of Competitiveness, 10*(2), 118-131. https://doi.org/10.7441/joc.2018.02.08

Mucuk, M., Ay, A., & Gerceker, M. (2013). The Relationship between International Oil Prices and Current Account Deficit: The Case of Turkey. *International Conference on*

Eurasian Economies, 65, 24-30. https://doi.org/10.36880/C04.00810

Ng, E. (2019). *Asia's Current Account: Good or Bad?* Nikko Asset Management. [Online] Available:
https://www.nikkoam.com.au/adviser/articles/2018/11/asia-s-current-account-good-or-bad

Olateju, A. O., & Danmola, R. A. (2013). The Impact of Monetary Policy on Current Account Balance in Nigeria. *Journal of Humanities and Social Science, 7*(3), 67-72. https://doi.org/10.9790/0837-0736772

Oshota, S. O., & Badejo, A. A. (2015). What Drives Current Account Balance in West Africa States: Evidence from Panel ARDL. *Journal of International and Global Economic Studies, 8*(2), 91-105.

Ousseini, A. M., Hu, X., & Aboubacar, B. (2017). WAEMU Trade and Current Account Balance Deficit Analysis: A Panel VAR Approach. *Theoretical Economics Letters, 7*(1), 834-861. https://doi.org/10.4236/tel.2017.74060

Ozdamar, G. (2016). A Survey on The Factors Affecting Current Account Balance of Turkey: Evidence from ARDL-Bounds Testing Approach. *The Journal of International Social Research, 9*(43), 2073-2082. https://doi.org/10.17719/jisr.20164317772

Pettinger, T. (2017). *Current Account Balance of Payments.* Economics Help. [Online] Available: https://www.economicshelp.org/blog/glossary/current-account-bop/

Purwono, R., Mucha, K., & Mubin, M. K. (2018). The Dynamics of Indonesia's Current Account Deficit: Analysis of the Impact of Exchange Rate Volatility. *Journal of Asian Finance Economics and Business, 5*(2), 25-33.
https://doi.org/10.13106/jafeb.2018.vol5.no2.25

Qiong, P. Y., & Rui, Z. (2013). Financial Development and Current Account Imbalance: Evidence from Dynamic Panel Data Model with GMM Estimation. *Journal of Applied Sciences, 13*(15), 2933-2939. https://doi.org/10.3923/jas.2013.2933.2939

Sadiku, L., Vehapi, M. F., Sadiku, M., & Berisha, N. (2015). The Persistence and Determinants of Current Account Deficit of FYROM: An Empirical Analysis. *Procedia Economics and Finance, 33*(1), 90-102. https://doi.org/10.1016/S2212-5671(15)01696-2

Sahoor, M., Mallick, H., Mahali, M. K., and Baharos, S. (2022). Factors Influencing India's Current Account Balance: Implication for Achieving Its External Sector Sustainability. *Journal of Public Affairs, 22*(1), 1-14. https://doi.org/10.1002/pa.2311

Shuaibu, M., & Oyinlola, M. A. (2017). An Empirical Analysis of Nigeria's Current Account Sustainability. *The Journal of Applied Economic Research, 11*(1), 54-76. https://doi.org/10.1177/0973801016676015

Sumiyati, E. E. (2022). Macroeconomic Factors and Current Account Deficit in Indonesia. *Economics and Business Quarterly Reviews, 5*(4), 8-18. https://doi.org/10.31014/aior.1992.05.04.455

World Bank. (2018). *The World Bank in Lao PDR*. [Online] Available: https://www.worldbank.org/en/country/lao/overview 68

Yigitbas, S. B. (2017). The Relationship Between Financial Depth and Current Account Deficit in Turkey. *Journal of Management Economics and Business, 13*(3), 507-521. https://doi.org/10.17130/ijmeb.2017331325

Yurdakul, F., & Cevher, E. (2015). Determinants of Current Account Deficit in Turkey: The Conditional and Partial Granger Causality Approach. *Journal of Economics and Administrative Sciences, 26*(1), 92-100. https://doi.org/10.1016/S2212-5671(15)00884-9