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How the American Dollar Exchange Effect on Foreign Direct Investment and Trade Balance? A Case in Indonesia during 2000-2019

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Abstract---*This study aims to determine the direct and indirect effects between the variables that are the object of research, namely the US Dollar exchange rate, foreign direct investment, and the trade balance in Indonesia. The data used is secondary data for the period 2000-2019. The data analysis technique used is path analysis with the help of the SPSS 27.00 program. Based on the results of the analysis of the variable US dollar exchange rate which has a negative effect on foreign direct investment, the US dollar exchange rate has a positive effect on the trade balance and foreign direct investment does not affect the trade balance. The US Dollar exchange rate has no indirect effect on the trade balance through foreign direct investment in Indonesia from 2000-2019.*
Keywords---*foreign direct investment, trade balance, US Dollar exchange rate.*

Introduction

Economic growth is a development of an economic activity that encourages increased output in society and encourages increased prosperity and welfare of society. The output circulating in the community includes goods and services (Sukirno, 2000). International trade of a country is a trade relationship involving the exchange of goods and services with other countries.

To these international trade activities, one of the issues that have garnered considerable attention, especially Indonesia's international trade in 2012, 2013 and 2014, is the occurrence of a deficit in Indonesia's trade balance. The trade balance for three years experienced a deficit indicating that the value of imports was greater than exports. The Central Statistics Agency (BPS) noted that until July 2013 the trade balance deficit reached USD 2.31 billion. Cumulatively from January to July 2013 the trade balance was a deficit of USD 5.65 billion and this figure was the largest in the history of Indonesia. The trade balance deficit was caused by a deficit in oil and gas commodities with imports reaching USD 33.59 billion and an export value of USD 23.85 billion because non-oil and gas commodities still had a surplus of USD 0.49 billion (Tempo, 2013). This shows that the Indonesian state is experiencing economic fluctuations due to many influencing factors. In 2015, the trade balance has been able to show a surplus, but this does not rule out the possibility that there will be a deficit in the trade balance for the next period (Wilson & Tat, 2001; Ferrero, 2010).

Previous research on the factors that influence the trade balance conducted by Khan & Hossain (2012), on the determination of the trade balance in Bangladesh using data for 26 years found that in the long run, there is a stable relationship between the determinants of the trade balance in Bangladesh. , these factors include the real exchange rate (REER), Gross Domestic Product (GDP), and Import weighted distance (MWD) to the trade balance in Bangladesh. Meanwhile, another study by Ashraf & Joarder (2009), on empirical analysis of the trade balance deficit in Bangladesh found that factors such as GDP, population growth, and the number of imported goods affect the trade

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balance in Bangladesh. Based on these two studies, it is known that the factors that affect the trade balance are the exchange rate, GDP, foreign direct investment, and population.

The relationship with the trade balance is influenced by several variables. One of the variables that affect the trade balance is Foreign Direct Investment (FDI). Foreign direct investment is defined as a long-term investment made directly by investors in the business field of domestic citizens (Almfraji & Almsafir, 2014; Liu, 2002; Neumayer & Spess, 2005). The relationship between FDI and economic growth in Indonesia is not as simple as in other countries in Southeast Asia. Although FDI can thrive in an investment climate that tends to be restrictive, under certain circumstances, it can also fail to grow, even under a more liberal regime. This can be attributed to the continued role of natural resources in determining Indonesia's attractiveness as a host country for FDI (Lindblad, 2015). According to Kennedy (2013), FDI has a positive effect on the trade balance because the trade balance in Kenya is negative. The estimation results also show that the real exchange rate depreciations improve the trade balance in a strong and significant way. The presence of foreign direct investment also affects the trade balance in Indonesia. From the supply side, exports are influenced by prices, domestic prices, the real exchange rate, production capacity that can be obtained through investment, imports of raw materials, and deregulation policies. If investment affects exports, it will also affect the trade balance. This was explained by Ginting (2014), that foreign direct investment has a positive effect on the trade balance.

The next factor affecting the trade balance is the US Dollar exchange rate. The exchange rate is the price of the currency used by residents of countries to trade with each other or international trade (Mankiw, 2007). According to Ng et al. (2008), the real exchange rate is an important variable to the trade balance, and devaluation will improve the trade balance in the long run, thus consistent with the Marshall-Lerner condition. This study aims to examine the relationship between the US Dollar exchange rate, foreign direct investment and the trade balance in the 2000-2019 period (Wang et al., 2011; Mensah et al., 2017; Norouzzade & Rahmani, 2006).

US dollar exchange rate and foreign direct investment

To the exchange rate with FDI Moosa in 2004 (in the book Lumbanraja, 2006) also put forward the theory of foreign direct investment, namely the currency areas hypothesis which states that companies in a country that have a strong currency value compared to other countries will tend to invest because countries with weak currencies tend to be unable to invest because the risks to be faced are high. In other words, countries with strong currency values are sources of FDI and countries with weak currencies are destinations for FDI (recipient countries). According to Nugraha (2013), A country with an unstable currency tends to pose more risk and uncertainty and thus be less attractive. Therefore, it is expected that exchange rate stability is positively related to FDI. The data on exchange rates was obtained from the United Nations Conference on Trade and Development's Statistics.

US dollar exchange rate and the trade balance

According to Mundell-Fleming, the relationship between the real US Dollar exchange rate and net exports is that if the real US Dollar exchange rate is lower, the price of domestic goods will be cheaper than the price of foreign goods so that net exports increase (Nanga, 2001). Countries that adopted the devaluation recovered quickly from the great depression. A lower currency value increases the amount of currency in circulation and encourages exports and increases production. In contrast, countries that maintain long exchange rates suffer longer with low levels of activity (Mankiw, 2006).

Foreign direct investment and trade balance

Krugman & Obstfeld (2000), stated that in the theory of international trade (Global Trade) it was stated that the factors that affect exports can be seen from the demand side and the supply side. From the demand side, exports are influenced by export prices, real exchange rates, world income and devaluation policies. Meanwhile, from the supply side, exports are influenced by export prices, domestic prices, real exchange rates, production capacity that can be obtained through investment, imports of raw materials, and deregulation policies. If investment affects exports, it will also affect the trade balance.

Methods

This research is a type of quantitative research because it is based on quantitative data in the form of associative. Associative form because the purpose of this study is to determine the relationship of one variable with other variables. Researchers will research to determine the relationship between several variables, namely the US Dollar exchange rate on the trade balance and foreign direct investment.

Data collection in this study was carried out by researchers by observing, taking notes, and studying descriptions from books, articles, and scientific works in the form of theses, journals, and documents available from related agencies such as BPS, Ministry of Trade, Bank Indonesia, browsing, and literature books on the US Dollar exchange rate, foreign direct investment and the trade balance in Indonesia. The data analysis technique used is a multiple linear regression analysis technique.

Results and Discussion

The effect of the US dollar exchange rate on foreign direct investment

The results of the analysis show that the standardized coefficient beta is -0.528, the probability value is 0.000 <0.05 and the t-value is -5.459, this means that H0 is rejected and H1 is accepted. Because the coefficient is negative, it means that the US Dollar exchange rate (X2) has a significant negative effect on foreign direct investment (Y1). The negative and significant effect of the US Dollar exchange rate variable on foreign direct investment obtained in this study is not following the currency areas hypothesis which states that companies in a country that has a strong currency value compared to other countries will tend to invest because the country whose currency is weak tend to be unable to invest. After all, the risks to be faced are high as stated by Moosa (Lumbanraja, 2006). Federica & Ratna (2013), also stated that the dollar exchange rate has a positive effect on foreign direct investment, if the dollar exchange rate increases, foreign direct investment will also increase.

The results of this study are following research conducted by Tambunan (2015), which states that the exchange rate of the rupiah against the US dollar has a negative effect on foreign direct investment, because when the rupiah against the dollar strengthens it will increase investors to invest domestically to get bigger profits. This means that if the rupiah exchange rate strengthens and the US dollar exchange rate weakens, foreign direct investment will increase.

The effect of the US dollar exchange rate on the trade balance

The results of the analysis show that the beta standardized coefficient is 0.799, the probability value is 0.033 <0.05 and the t-value is 1.978 > 1.673. This means that H0 is rejected and H1 is accepted. Because the coefficient is positive, it means that the US Dollar exchange rate (X2) has a significant positive effect on the trade balance (Y2). The positive and significant effect of the US Dollar exchange rate variable on the trade balance is following the theory According to Mundell-Fleming, the relationship between the real US Dollar exchange rate and net exports is that if the real US Dollar exchange rate is lower, the price of domestic goods will be cheaper than the price of foreign goods. foreign goods so that net exports increase (Nanga, 2001). The increase in net exports compared to imports will increase the trade balance. Ahmad & Stevenson (2012), said that most importantly a depreciation of the US Dollar has a positive impact on the trade balance in the period that it occurred between the United States and Mexico. The results of this study are also supported by research by Rachmawati (2014), which states that the US dollar exchange rate has a positive effect on the trade balance. This means that when the US Dollar exchange rate rises, the price of Indonesian export goods is more expensive when compared to imported goods which can increase the trade balance. According to Nazeer et al. (2015), the Exchange rate positive relationship with the balance of trade. The relationship between the exchange rate balance of trade and the balance of payment. Exchange rates help a country while making imports and export.

Based on the results of the analysis above, it can be explained that if the US Dollar exchange rate increases, it will be able to increase Indonesia's trade balance and vice versa. This means that when the US Dollar exchange rate rises, the price of Indonesian export goods is more expensive when compared to imported goods which will encourage people to export. Rising exports can improve the trade balance (Lane & Milesi-Ferretti, 2002; Arize et al., 2017).

The effect of foreign direct investment on the trade balance

The results of the analysis show that the beta standardized coefficient is 0.382, the probability value is 0.275 > 0.05 and the t-value is 0.610 <1.673. This means that H0 is accepted and H1 is rejected, meaning that foreign direct investment (Y1) has no significant effect on the trade balance (Y2). The positive and insignificant foreign direct investment variable on the trade balance obtained in the study is not following Krugman & Obstfeld (2000), stating that in international trade theory (Global Trade) it is stated that the factors that influence exports from the supply side, exports are influenced by export prices, domestic prices, real exchange rates, production capacity that can be obtained through investment, imports of raw materials, and deregulation policies. If investment affects exports, it will also affect the trade balance. Kennedy (2013), argued that FDI has a positive effect on the trade balance because the trade balance in Kenya is negative. The estimation results also show that the real exchange rate depreciations improve the trade balance in a strong and significant way.

Hailu (2010), also stated that the positive and significant FDI elasticity of exports implies that FDI has an important contribution to the export subsector of the continent. Expanding FDI in the region will have a positive effect on export promotion and afterwards on the trade balance. In Ginting (2014), increasing incoming foreign investment will be able to help meet people's needs thereby reducing imports. The reduction in imports of goods that occurs will lead to an increase in Indonesia's trade balance. Ginting (2015), also states that FDI has a positive effect on the trade balance in ASEAN-6, but for countries that have negative trade balance growth, such as Indonesia and the Philippines, incoming FDI flows, manufacturing sector growth and economic growth have not been able to stimulate an increase in the trade balance.

Conclusions and Suggestions

The US Dollar exchange rate has had a significant negative effect on foreign direct investment in Indonesia from 2000-2019. The US Dollar exchange rate has had a significant positive effect on the trade balance in Indonesia from 2000-2019. Foreign direct investment has no significant effect on the trade balance in Indonesia in 2000-2019.

Based on the results of the analysis and conclusions, the following suggestions can be put forward: The government should strengthen the value of the rupiah against the US Dollar to increase foreign direct investment in Indonesia. The strengthening of the value of the rupiah against the US dollar will spur a surplus in the trade balance so the government must be more careful in making policies. The results of the analysis show that other variables are not included in the model. In further research, it is suggested that the research object be expanded by adding variables related to the trade balance in Indonesia such as the monetary standard of ownership and state debt.

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