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FOREIGN DIRECT INVESTMENT DETERMINANTS IN THE PHILIPPINES

Jesson Rey F. Sabado,
Precious Grace Angelika T. Garcia,
Jonica B. Formentera,
Glydelyn S. Arcebal[i]
College of Business Administration Education,
University of Mindanao,
Davao City, Philippines

Abstract:
Foreign direct investment (FDI) significantly boosts one country's economy and development, including the Philippines. The Philippines has continuously pursued policies to attract FDI inflows to promote economic growth, generate employment, and improve technical skills. This study is to determine the Foreign Direct Investment determinant of the Philippines, present the real GDP growth, industry value added, and real exchange rate of foreign direct investment in the Philippines from 1970 to 2020, and provide empirical evidence of foreign direct investment and the following determinants. Data on real GDP growth, industry value added, real exchange rate, and FDI of the Philippines from 1970 to 2020 are sourced from the World Bank data. The Ordinary Least Squares (OLS) regression analysis identify factors that significantly affect the FDI inflows in the Philippines. Results indicated that the real exchange rate affects the FDI inflows in the Philippines. These determinants have p-values that are lower than the 5% significance level. Thus, understanding these determinants can assist policymakers and investors in making sound choices to encourage and sustain FDI inflows, which can contribute to the Philippines' economic progress and prosperity.

JEL: F20; F21; F30

Keywords: real GDP growth, industry value added, real exchange rate, foreign direct investment

[i] Correspondence: email jessonsabado@umindanao.edu.ph, pgagarcia15@gmail.com, j.formentera.477509@umindanao.edu.ph, g.arcebal.477793@umindanao.edu.ph

1. Introduction

Foreign Direct Investments (FDI) are the most significant source of foreign capital inflow since they are a direct contribution from outside sources of the economic system of the host nation, this investment allows foreign investor retains ownership, control, and management of the enterprise in which they invest capital for the long term (Susic, M., Stojanovic-Trivanovic & Susic, M., 2017). Moreover, Kuznetzov (2020) describes foreign direct investment (FDI) as a transnational investment in which an individual (the direct investor) in one nation invests in another to achieve long-term strategic control over a subject (typically a subsidiary corporation).

Mayoshi, Rathnayaka Mudiyanselage & Epuran, Gheorghe & Tescasiu and Bianca (2021) affirms that it is one of the most significant drivers of global capital flows to developing nations, emerging economies, and transition economies during globalization. It is necessary for the growth and development of an economy, as well as for the advancement of a nation's technology sector and the creation of new job possibilities.

Foreign direct investment is a critical issue for many countries because it benefits in numerous ways, including fostering economic growth, providing access to management expertise, financial support, marketing expertise, and job creation (Kariuki, 2015). As a developing country that has attracted significant foreign investment in recent decades, identifying the factors influencing FDI is preferable. Politically dangerous countries or regions with a history of expropriating FDI, widespread corruption, dictatorship, poor rule of law, and conflicts between ethnic groups are less attractive to FDI. Numerous political considerations, such as a state's political stability or the state government's political relations with the central government, have also played a significant role in attracting FDI flows, as stated by the Indian record. Political instability caused by Naxalite movements, various corruptions, and scandals has hampered FDI flows to several Indian states in recent years, Mukherjee, A. (2011). As the global FDI flows fell by one-third to $1 trillion in 2020, their lowest level since the global monetary crisis, COVID-19 has harmed the most productive investment types, such as greenfield infrastructure and industrial development, particularly in developing countries. This phenomenon suggests that international production, the engine of global economic growth and development, has been significantly impacted (Koçak, S., Barış-Tüzemen, Ö. 2022)

Foreign direct investment (FDI) is a transnational investment in which an individual (the direct investor) in one nation invests in another to achieve long-term strategic control over a subject (typically a subsidiary corporation). FDI is a direct investment firms are often corporations. They can be subsidiaries or associates, holding over 50 percent of the voting power, or quasi-corporations like ranches, where their respective parents are 100 percent owners. FDI indicates complete control over a direct investment firm; a study by Simionescu & Naros (2019), any country's economic development is significantly impacted by FDI because it is necessary (prerequisite) for attracting new investors or raising the standards of its human resources. Moreover, FDI is critical to global economic integration because it creates strong, long-term economic

ties between nations. There are numerous variables, the impacts of which depend on the traits of every nation, economic sectors, and investment, (Susic et al., 2017). There are two ways to examine variables: first, they supplement. Second, they promote the host nation's development through technology transfer, human resource development, and enhanced local business visibility on the international market.

International businesses and companies (TNCs) primarily contribute to FDI flows. FDI is significant at various stages of host nation development, from ownership advantage to production network expansion (Network theory) (Dunning, 2014). Furthermore, a sustainable FDI operates within an ethical governance framework and contributes to the host country's social, environmental, and economic development (Mann & Sauvant, 2017). Foreign direct investment can provide many benefits, such as savings in transportation costs, lower labor costs, available infrastructure, customs costs, closer position to customers, quick and efficient delivery, and availability of customer preferences. The challenges in developing countries must develop distinct factors to determine FDI location and match those factors to corporate strategies. Policies must strengthen national innovation systems and encourage technology diffusion to generate assets (G20, 2020).

Most countries can attract FDI into critical infrastructure sectors such as energy, water resource management, transportation, and low-carbon economy development through FDI in sustainable supply chain management and renewable energy. Singhania, M., & Saini, N. (2021) asserts a strategy like this is implemented at the corporate level before spreading to domestic businesses through a contagious effect. The host country's financial development and institutional quality are economic and long-term FDI determinants (Tamazian & Rao, 2010; Mann & Sauvant, 2017). Foreign direct investments contribute significantly to the Romanian economy. OECD (2020), implies that FDI could assist economies during and after the crisis by providing financial assistance to their affiliates, assisting governments in dealing with the pandemic, and establishing links with local firms.

Furthermore, several factors influence FDI, allowing investors to make sound decisions. A study conducted by Dela Cruz et al. (2022), the Gross Domestic Product (GDP) is the economic value of a country's final goods and services (those consumed by the end-user) produced over a specific period. It collects data on all goods produced within a country's borders (Callen, 2008). It calculates and charts a country's wealth over time, reflecting its GDP and foreign revenue (Investopedia, 2022).

GDP is significant because it provides information about the size and health of a country's economy, and real GDP growth measures the economy's state. In other words, investors and economists perceive an increase in real GDP as indicating that a country's economy is performing well (Callen T., 2008). As stated in the study by Ullah, I. & Khan, M.A. (2017), Real GDP, domestic investment, and the governance index positively correlate with FDI inflows in Central Asia. However, the impact of the economic freedom index on FDI needs to be more conclusive and hostile. In addition, domestic investment positively impacts FDI inflows in all sectors, and FDI benefits Thailand's economy significantly. Based on the study United Nations Conference on Trade and Development

(UNCTAD) (2015), Thailand's FDI stock exceeded 50 percent of its GDP, demonstrating the importance of FDI to this country. This demonstration leads to the expectation that the relationship between FDI and GDP is positive. And, in a recent study, Murari (2017) researched the correlation between financial development and economic growth in terms of GDP, using panel data from South Asian countries with middle-class incomes from 1980 to 2013.

Moreover, Kariuki (2015) examined the correlation between GDPs per capita and FDI in the developing economies of Central and Eastern Europe. The researchers claim that the concept of GDP per capita as a potential variable explaining why some states are more attractive to FDI than others has not been the subject of much investigation. Sahoo & Sethi (2017) conducted empirical research on the long-term causal relationship between FDI and economic progress in India as measured by GDP using annual time series data in more recent studies. They also concluded that India's national development policy should focus on effectively exploiting growth benefits in a country's development process and domestic and foreign direct investment.

Furthermore, GDP is an important macroeconomic variable as it gives information about the size and performance of an economy. An increase in real GDP is a good indication of the economy. Therefore, this situation creates an optimistic perception for investors and economic agents as the economy of a particular country is in good condition (Alshamsi K. H. et al., 2015). The researchers further elaborated that a favorable environment is a crucial determinant of FDI inflows. Security, political and economic stability, infrastructure, availability of human resources, and the relaxed border situation increase investors' confidence. The recipient country attracts more FDI and benefits more when the conditions are favorable (Callen T., 2008).

Industry Value Added (IVA) refers to an industry's contribution to a country's Gross Domestic Product (GDP), including mining, construction, manufacturing, water, electricity, and gas. The value added of a sector is the net output after adding and incorporating all outputs and eliminating intermediate inputs. As stated, the World Bank, it estimates without considering the depreciation of generated assets or the depletion and degradation of natural resources. Industry value added, called GDP-by-industry, measures how much the private or public sectors' industries contribute to overall GDP. Compensation for employees, taxes on production and imports, fewer subsidies, and gross operating surplus are the components of value added. (US Bureau of Economic Analysis, 2006). As stated in the study conducted by Zekos, G. I. (2016), when diverse preferences, host government regulations, variations in distribution platforms, and market structures necessitate a coherent approach, value-added operations customized to a specific environment. World-class manufacturing methods are suitable for reducing and eliminating excess inventory and waste, improving quality, and increasing customer satisfaction.

The value added by the industry is a significant factor that assists investors in making something valuable more profitable and identifies waste in business procedures and practices (Zekos, G. I., 2016); furthermore, value addition is essential to a world-class manufacturing strategy. It is a crucial competitive weapon for international or national

corporate success in today's internationally competitive market and a crucial command weapon for international or national corporate success. As a result, industry value added is a competitive advantage and an effective marketing tool that leads to profits and attracts FDI inflows. The study of Antwi G., Antwi O., & Poku P. (2013) discussed that the F statistic indicates the level to which the regression line integrates the actual data. Because the p-value is less than 5 percent, they conclude that the Industry Value Added can simultaneously explain or influence FDI inflows. It has significant policy consequences, and the government must be mindful of the impact of FDI inflows and their effects on economic growth. In addition, Industry value -added is significant in attracting FDI inflows with Coef. 0.06*, -0.08*/0.07*, -0.04.

The study of Azarhoushang B. et al. (2015) explained that due to Chinese government rules, the researchers discovered that government policies are crucial in directing FDI in the right direction so that local businesses can absorb it and reap the benefits of positive externalities. The Chinese government, for instance, has openly recognized that attracting more "high-quality foreign direct investment" is now their country's most significant issue. In contrast, Thai governments uphold conventional trade liberalization measures to attract additional investment. Due to Chinese government rules, the researchers discovered that FDI expansion in medium and high-value-added industries has a more significant overall influence in China than low-value-added enterprises in Thailand (Azarhoushang B. et al., 2015). The number of FDI-related regulations worldwide increased by 25 percent in 2012, indicating that governments have recognized the importance of industrial policy in increasing domestic productivity and value-added (Zhan, 2013). Investing in infrastructure, changing regulations and laws to favor foreign investors, opening Special Economic Zones (SEZs), maintaining high GDP growth (10 percent), and transitioning to a more liberalized market-based system sent a positive signal to investors. In addition, Alfaro, L., & Charlton, A. (2013) show that by using least-square estimates, there is a significant relationship between value-added industry growth and FDI flow. There is also substantial evidence that industry investments stimulate and encourage higher-quality FDI.

The Exchange Rate refers to the price firms and consumers currently pay to purchase foreign goods and services using their domestic currency. It is a significant price and principal factor determining the foreign direct investment entering an open economy; there are several models for FDI inflow and some major countries to assess the relationship between real exchange rate and foreign direct investment (FDI) inflow.

Bakari, S. & Mabroukib, M. (2018) examined the FDI in Tokyo by assessing how these investments affect the city's exchange rate, money supply, industrial output, rate of interest, and inflation. They utilized a Vector Error Correction Model (VECM), monthly measurements, and direct observations for each variable between January 1971 and December 1990. Their study found that those variables positively correlate with one another.

Moreover, Chishti M. Z. (2021) examines the relationship between Foreign Direct Investment (FDI) and Real Exchange Rate (RER) in Pakistan, Bangladesh, India, and Sri Lanka over the years 1994-2000. Like Bakari, their study looked at the short-term and

long-run correlation between FDI and real exchange rate using VECM, co-integration, and the conventional Granger causality test. It shows no short-term relationship among variables within all four countries and a long-term correlation for India and Pakistan.

Foreign Direct Investment effectively channels resources across national borders to improve industrial and economic performance, international competitiveness, and exports (Benson, E., Eya, I., & Yunusa, A., 2019). As these investments are undertaken across various independent states or nations, means that the movement of capital is changed from foreign currencies into home currency, as the transfer of capital as well as the flow of returns, is likely to be influenced by the exchange rate fluctuations (Okonkwo, J. J., Osakwe, C. I., & Nwadibe, E. C., 2021). The volatility and uncertainty in an exchange's core value affect the initial acquisition price and the final returns. It demonstrates how variations and unpredictability in exchange rates can impact the flow of external finances (Eregha, 2017). A traditional study, which assumes a weaker currency, entices foreign direct investment (Qamruzzaman, M., Karim, S., & Wei, J., 2019); (Brahmasrene, T. & Lee, J. W., 2020). Some academics see a positive correlation between the two factors in both studies by Ogbonna (2019) and Ayomitunde, A. T., Ganiyu, A. B., Matthew, S. G., & Bako, Y. A. (2020). Meanwhile, Polat & Payashoglu (2016) explained that FDI and RER in Turkey shows that currency fluctuations did not affect foreign direct investment (FDI).

Also, China pointed out that FDI does not correlate to the exchange rate (Gautam, S., Chadha, V., & Malik, R. K. 2020). Djulius (2017) studied the data in Indonesia from 1981 to 2015, in which he analyzed what factors led to FDI in the country. Based on the results, the exchange rate influences FDI positively. In addition, an increase in the exchange positively affects FDI in Russia and Belarus from 1997 to 2017 (Burakov, D., Intse, M., & Freidin, M., 2018). However, in the study of Ibrahim & Raji (2018), the Real Exchange Rate (RER) substantially adversely affects foreign investors' acquisition and merger decisions in ASEAN nations.

The exchange rate can influence stock prices in several ways. Inflation caused by a decline in the local currency would hurt prices. A further consequence would be an increase in the cost of importing goods, which would cause fewer businesses to engage in this activity (Agyapong, D. & Bedjabeng, K. A., 2019). The economy benefits from an increase in the value of a nation's currency, which has a positive knock-on effect. When the value of a nation's currency rises, the interest from investors from other countries in that country's economy also rises, and vice versa. In continuation with the previous statement, Udemba, E., Magazzino, C. (2020) state that numerous empirical research studies have discovered that the exchange rate hurts stock prices. On the other hand, other research finds a positive relationship between the exchange rate and stock prices.

The cost effect, the wealth effect, and the demand effect are also part of the most significant hypotheses on the relationship between FDI and RER. More specifically, the relative production cost of foreign investors in the host nation decreases due to the depreciation of the host country's currency and the appreciation of the foreign currency; it includes reductions in the cost of labor and materials and fixed costs. Hence, foreign investors must spend less money to acquire production inputs in the host nation. This

phenomenon makes it easier for foreign investors to increase the size of their investment in the host country; in return, it boosts the amount of FDI inflows into the country of origin, according to Syarifuddin (2020).

In contrast to cost-effectiveness, which emphasizes how the prices of production inputs in the host country have changed, the wealth effect focuses more on how much purchasing power foreign investors have. Based on their research, Li, Y. & Rengifo, E. W. (2018) conclude that when the rest of the situations stay the same, a shift in the exchange rate alters the relative wealth of foreign investors, consecutively affecting the purchasing power of the same assets held by those investors in the host nation. In the study of Anthony C. & Kaz M. (2020), the demand influence is evident in their research, indicating that the exchange rate favors FDI inflows. An increase in the host country's currency leads to a rise in GDP when measured in foreign currencies, which increases local demand and attracts market-oriented FDI. Unlike the demand and cost-effectiveness, the wealth effect may adequately explain the constant long-term connection between the exchange rate and foreign direct investment inflows (Tan L., 2021). Their study supports this finding through the co-integration test and Granger causality test. It demonstrates how MNCs are more concerned about their global purchasing power than local factors like labor cost or market demand.

The present study imparts the FDI determinants by addressing their influence on FDI inflows. The study's theoretical and conceptual framework assesses the factors of the country that propagate and strengthen foreign direct investment inflows. British economist Richard F. Kahn proposed the accelerator effect in the 1930s, and American economist Paul A. Samuelson further developed it in the 1940s. It demonstrates how the level of investment inflows correlates with the factors that affect the GDP growth rate. Economicshelp.org (2008) suggests that an increase in economic growth rates drives proportional investment inflows. There is an apparent relationship between determinants and investment inflows. Companies often make more significant investments; thus, they need to be sure the economy can support their investment before making it. If so, the investment is motivated by changes in consumption or income to expand capacity.

Furthermore, to comprehend the determinants of FDI inflows, which relate to the variables that determine the quantity and direction of FDI in a host nation. The accelerator effect suggests that changes in some variables can have a multiplier effect on FDI inflows, like how variations in investment can influence economic output. In addition to macroeconomic measures that encourage investment through the accelerator effect, several investment-focused policies might help boost investment, thus helping to enhance the economy's rate (Lewis, C. et al., 2014).

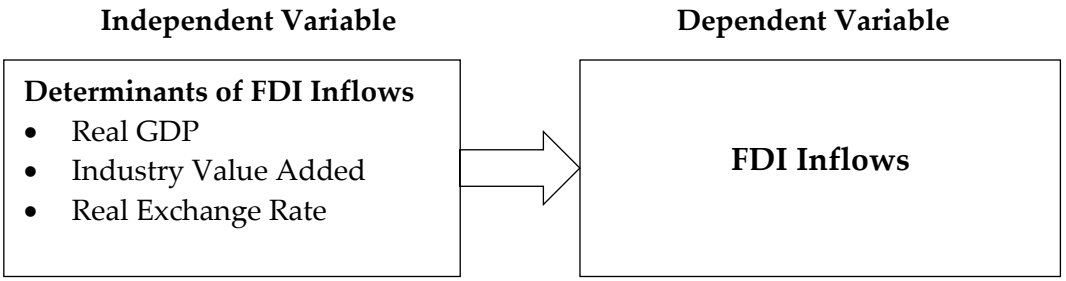


Figure 1: Conceptual Framework of the Study

In this research, the study's gap is determining what FDI determinants significantly impact attracting FDI. Foreign Direct Investment is an essential factor that promotes growth in one economy. The Philippines is also participating in this activity and has witnessed a rapidly rising trend of foreign direct investment (FDI) inflows since the 2008/2009 Global Financial Crisis. However, the country is still ranked the poorest in most indicators in choosing which country to put their capital in for long-term investments.

The study's primary objective is to determine the determinants influencing Foreign Direct Investment in the Philippines. As asserted, this research study undergoes the following steps. First, present the real GDP growth, industry value added, and real exchange rate of foreign direct investment in the Philippines from 1970 to 2020. Second, by providing empirical evidence of the relationship between foreign direct investment and the following determinants: real GDP growth, industry value added, and exchange rate.

The study helps financial institutions, investors, policymakers, and future researchers. Financial institutions benefit from setting up regulations and frameworks to enhance the financial system's quality of services and efficiency. Financial institutions can accelerate the investment process and so as the economic growth of the country. Moreover, it pushes the financial sector to bring capital, modern technologies, and knowledge for reforms. Also, the study informs every investor on the relevant decision-making process in establishing their interests in the potential economy. The study leads the investors to identify investment opportunities and evaluate investment efficiency, consequently improving the economy. Investors gain crucial information about the firm's productivity, significantly influencing better investment capital flows and providing more job opportunities.

In addition, for policymakers, the result of the study serves as the benchmark information that guides the policymakers to formulate new policy measures, implement a better management system, and analyze the impact of foreign direct investment in the Philippines. Hence, policymakers are constantly acquiring new knowledge to achieve development objectives. Thus, the study injects new knowledge and serves as a tool for policymakers to attain development and enhance the FDI performance of the country and ensure that FDI creates better-paying jobs and increases the competitiveness of the host economies. Lastly, it benefits future researchers as this research could provide ideas and suggestions for future academic researchers, significantly influencing a more efficient

and effective financial system. This study serves as their source of information to generate new and enhanced ideas.

2. Method

2.1 Data Sources

The data sources define a study's several components, including data collected and gathered throughout the study process. The data on the following variables, including Real GDP Growth, Industry Value Added, Real Exchange Rate, and FDI inflows, be collected from the World Bank Data from 1970 to 2020. The period of this study is 50 years. The data availability, interpretability, and projection accuracy throughout the year were the basis for identifying the variables.

The variables used in the study were measured as follows; Foreign Direct Investment net inflows (percent of GDP), Real GDP Growth (annual percent), Industry Value Added (annual percent growth), and Real Exchange Rate (LCU per US$).

2.2 Research Design and Procedure

This research paper utilized the inferential statistics method as a research design. Inferential statistics allow researchers to describe and evaluate the data of the inflows of FDI determinants and their effects on the overall economy and generate conclusions and inferences from specific data. With the collected data, the researchers may determine what a majority may perceive or how it influences using inferential statistics. The sample data is quantifiable information referred to as quantitative data. It is objectively analyzed data that can be measured and evaluated through statistical analysis.

To represent the independent and dependent variable relationships through a transformed economic model into an empirical model. It can be accomplished using regression analysis, which focuses on how the dependent variable changes in response to changes in the independent factors.

$$Y = (X1, X2, X3, X4, X5) \quad (1)$$

Where;
Y = Foreign Direct Investment,
X1 = Real GDP Growth,
X2 = Industry Value Added,
X3 = Real Exchange Rate.

The Ordinary Least Squares (OLS) regression method is a statistical approach used to analyze and estimate the relationship between the independent variables and a dependent variable and shows the performance of each variable. The relationship is estimated to produce a single straight line to minimize the sum between the actual and projected values of the dependent variable. Ordinary least squares regression has been utilized under error, homoscedasticity, and no autocorrelation.

The mean of the error terms is zero.

a) $E(e) = 0$
   The errors have the same variance (homoscedasticity).
   $Var(e) = \sigma^2$
b) No error is serially correlated (no autocorrelation).
c) $Cov(e_1 ej) = 0$ where $i \neq j$

The OLS estimator is reliable and constant when the repressors are exogenous and there is no occurrence of intercorrelated variables or multicollinearity. Moreover, it is significant in linear unbiased estimation methods when the errors are homoscedastic and serially uncorrelated. Under these conditions, the OLS technique gives a minimum-variance mean-unbiased assessment when the errors have limited variance. If assumptions are compromised, multicollinearity, heteroscedasticity, and autocorrelation happen.

Moreover, multicollinearity happens when a new variable is added to the model since there could be connections between several elements. The occurrence of non-constant variance in the error terms leads to heteroscedasticity. The occurrence of correlation in error terms lessens the accuracy dramatically, which is common in time-series models where the next moment relies on the preceding instant. When the error components are associated, the estimated standard errors are less than the absolute common errors (Slight, 2022). There is always the risk that subsequent failures are linked. This association between errors is known as autocorrelation, and it violates the third assumption. The Durbin-Watson (DW) statistic evaluates autocorrelation in regression residuals. It is always assumed to have a value between 0 and 4. If a value of DW equals 2, this implies no autocorrelation exists. The DW statistics are listed in the table below.

Violating the second premise is a significant consideration in the heteroscedasticity problem. If such difficulties exist, the generalized least squares (GLS) approach is used to eliminate the source of the problems.

Equation (1) is the basis for the model of the study. The empirical model emphasizes analyzing the data just with some assumptions about the data involved and expressed as:

$$FDI = \beta 0 + 1GDP + b2IVA\ b3RER + \text{Ɛ}i \quad (2)$$

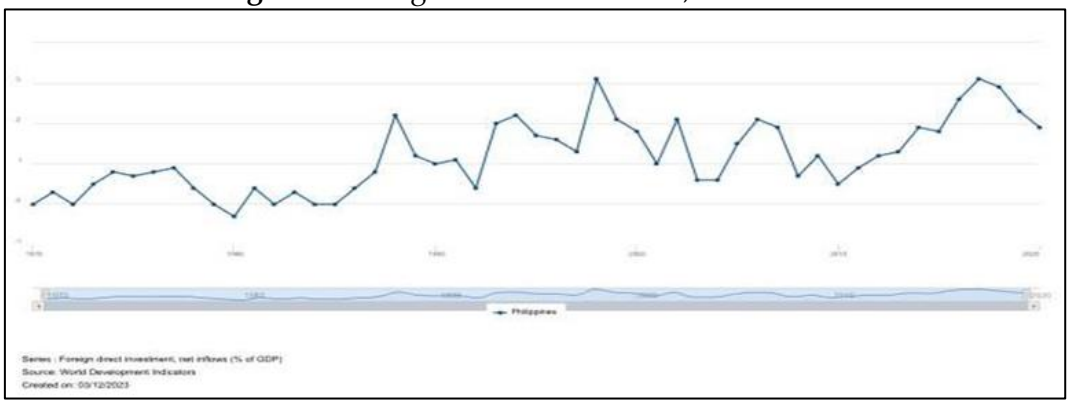
Where:
FDI = Foreign Direct Investment,
GDP = Real GDP Growth,
IVA = Industry Value Added,
RER = Real Exchange Rate,
Ɛi = Error Term.

3. Results and Discussion

This chapter presents, analyzes, and interprets the statistical results of this study. The succeeding tables presented different results, along with corresponding discussions and recommendations.

3.1 Graphical Presentation of the Variables

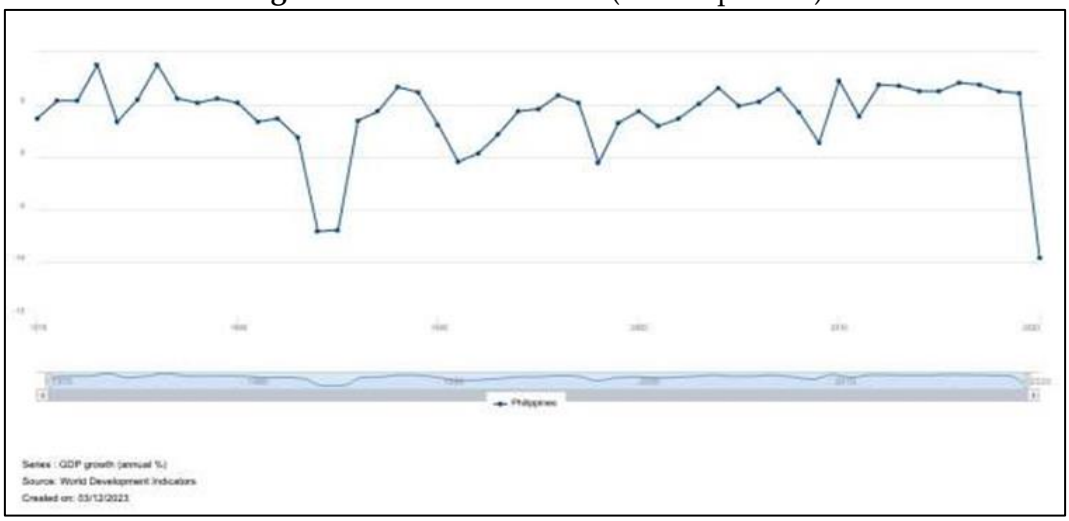
Figure 2: Foreign Direct Investment, Net Inflows



Source: https://data.worldbankorg/indicator/BXKLDINVWDGDZS

The graph above illustrates the fluctuating trend of FDI inflows in the Philippines from 1970-2020, with an average rate of 1.20. The highest point was in 2017 at 3.12 percent, and a record low in 1970 at -0.01 percent. Due to significant foreign investments in petroleum and gas, mining's share increased dramatically from 3 percent in 1973 to 27.5 percent in 1987. Its share, however, began to decline in 1988, and in 1993 it accounted for 20 percent of total FDI. While starting to liberalize its foreign exchange (FX) regulations in the 1990s, the Philippines' capital inflows were halted by both Tequila (Mexican Peso) Financial Crisis in 1995 and Asian Financial Crisis in 1997-98, Tetangco, 2005). The movement of FDI inflows in the host country continuously shows a significant fluctuation even in early 2000 up until the recent year. In 2017, foreign direct investments (FDIs) entering the Philippines climbed to $8.7 billion, beating the BSP's full-year target of $8 billion (Philippine National Statistics, 2018). This fluctuation throughout the period can also be attributed to the crisis experienced by the host country and the policies regulated by different administrations. On the basis of the study of BSP, the sustained FDI inflows reflect investor confidence in the Philippine economy, which has strong macroeconomic fundamentals and growth prospects.

Figure 3: Real GDP Growth (annual percent)

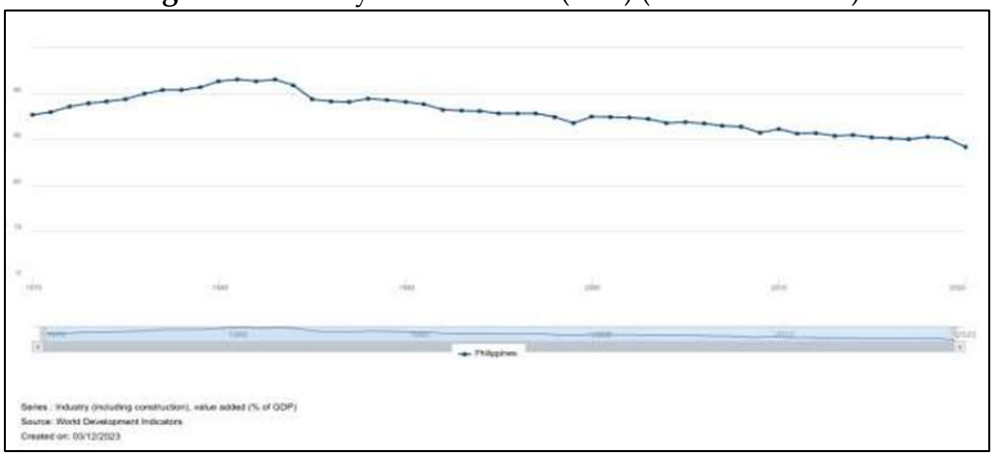


Source: https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG

Figure 3 presents the GDP growth Philippines from 1970-2020. Since 1979, the Philippines' GDP growth rates have been progressively declining and had a significant decline during 1984, which has - 7.0394, and in 1985 -6.8584. Consider GDP: The average GDP growth rate from 1972 to 1985 was 3.4 percent yearly. In comparison, even under a bumbling and quarrelsome democracy, the average GDP growth from 2003 to 2014 was 5.4 percent per year, with a rising trend (Emmanuel S. de Dios, 2015). The National Economic and Development Authority states that The Philippines has performed admirably in GDP since 2010, with an average growth rate of 6.3 percent from 2010 to 2014. A yearly GDP growth rate of 2.5–3.5 percent is ideal for creating enough new jobs and increasing corporate profits.

In addition, a significant deviation from the average growth rate aids in accelerating the improvement and stabilization of the economy in developing nations like the Philippines. Moreover, for the next three decades, the GDP growth rate continuously fluctuated without massive declines, not until 2020, recorded as the lowest percent at -9.5183.

Figure 4: Industry Value Added (IVA) (Percent of GDP)

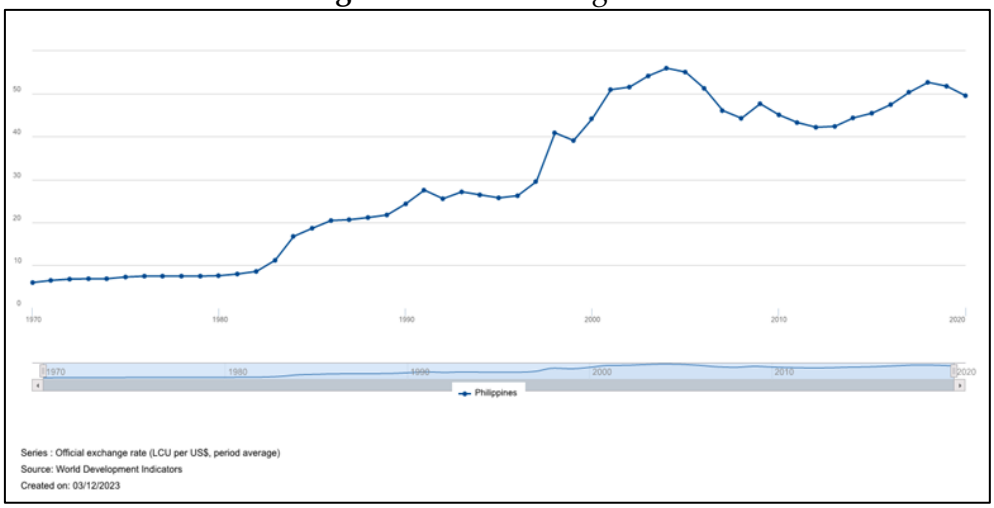


Source: https://data.worldbank.org/indicator/PA.NUS.FCRF

The figure above shows the trend of Industry Value Added in the Philippine economy from 1970-2020, with an average of 36.55 percent. This indicator reached its peak in 1981 at 43.11 percent. Increased productivity and efficiency in manufacturing processes, capital equipment, technology investments, and favorable economic policies and conditions contribute to the 43.11 percent growth. When government policies, such as industrial policy, tariffs, and trade policies, assisted and stimulated industrial expansion in early 1980, the Philippines reformed its trade policy by lowering tariff rates and reducing quantitative import constraints. Based upon the report of Philippines Statistics Authority, the manufacturing industry value added in 1981 was 43.7 billion pesos. With 9.9 billion and 3.3 billion pesos, respectively, the building and mining industries also substantially contributed to the industry's value added.

However, the value of industry added hit a low in 2020 (28.4 percent) compared to the previous year (2019), which had 30.3 percent. The country's IVA fell significantly in 2020, primarily because of the impact of the COVID-19 outbreak. The pandemic disrupted the worldwide supply chain, causing a recession in the country's primary industries, including manufacturing, construction, and services. Due to quarantine measures, movement limitations, and lowered demand for their products and services, several factories and enterprises were forced to temporarily close or reduce their operations. Moreover, decreased government investment in infrastructure and other projects due to budget limitations resulted in a decrease in construction sector production (Nicola M. et al., 2020).

Figure 5: Real Exchange Rate



Source: https://data.worldbank.org/indicator/NV.IND.TOTL.ZS

Figure 5 shows the real exchange rate of the Philippines from 1970-2020. As one may observe, the trend follows a fluctuating pattern. In 1970, the real exchange rate of the Philippines was 5.90 PHP/USD, the lowest in the years. The study by Mariano et al. (2016) stated during 1973 that the currency was floating among industrialized countries. Moreover, the Bretton Woods exchange rate parities among IMF members were terminated. The Philippine peso's exchange rate with the US dollar was already in

"managed floating" in 1970. By December, the exchange rate was PHP 6.40 per dollar, a 61 percent deflation during that year.

In 1962 the Philippine peso was devalued from PHP 2.00 to PHP 3.90 per dollar. Developing countries with strong trade and payment connections to developed nations may be affected by external changes in effective currency exchange rates. However, the exchange rate between the USD and PHP is naturally essential to the Philippines. In 2004, the real exchange rate in the Philippines was PHP 56.039 or 56.04, the highest throughout the indicated period. As claimed by Bangko Sentral ng Pilipinas, in their annual report 2004, the average exchange rate of the Philippine peso versus the United States dollar was PHP 56.04 to $1, down 3.28 percent from 2003. The government had predicted a range of PHP 54-56 per USD. Therefore, this was close to the upper end of that range.

Due to rising import requirements, foreign exchange rate liabilities, and energy price volatility, the dollar currency demand surged during that year. The peso fell due to budgetary concerns and rising oil prices, which raised market expectations of more significant inflation and interest rates. The international credit rating downgrades also impacted the local currency. The peso depreciated due to regional currencies' weakness against the USD dollar, especially in the third quarter, owing to the US Federal Reserve's tightening. Surprisingly, positive improvements slowed the local currency's fall. OFW dollar remittances kept the peso strong. The peso rose after CalPERS, a significant American pension fund, retained the Philippines on its investment list.

Table 1: OLS Regression Analysis Results

Foreign Direct Investment	Coef.	Standard Error	T-ratio	p-value
Constant	0.9337	9.1762	0.10	0.9190
Real GDP Growth	0.2618	0.2621	1.00	0.3240
Industry Value Added	-1.1157	2.3002	-0.49	0.6300
Real Exchange Rate	0.7805	0.3021	2.58	0.0140

*Significant at 5 percent NS = Not Significant; R2 = 0.4411

Table 1 shows the estimated coefficients determined by the Ordinary Least Square (OLS) regression analysis. The result shows that the Real Exchange Rate, one of the determinants, significantly affects the inflows of FDI as indicated by its p-values lower than a five percent (5 percent) significance level. Meanwhile, the other two, the real GDP growth and industry value added, have the results of p-values higher than the significance level; this indicates that it does not have a significant influence over FDI inflows.

Based on the model, Real GDP Growth (GDP) and Real Exchange Rate (RER) has a positive coefficient sign; a 1-unit increase in Real GDP Growth and Real Exchange Rate increases the inflows of FDI by 0.2618 and 0.7805, respectively. Moreover, if Industry Value Added increases by one unit, FDI inflows decrease by -1.1157. Furthermore, the model registered an R2 of 0.4411, which indicates that the model explains 44.11 percent of the variation of FDI determinants. The remaining 55.89 percent is explained by the other factors not included in the study.

The study conducted by Kosteletou & Liargivas's (2000) states that the real exchange rate has significantly increased both inflows and outflows of FDI in several countries, especially in US, Europe, and Japan. Also, in the study of Mugableh (2015) and Tri et al. (2019), an increased exchange rate attracted FDI inflows for Malaysia and ASEAN, respectively. Abundant natural resources, a highly skilled workforce, advanced technology, a strong economy, and a stable political environment make it attractive to foreign investors despite having a high exchange rate. Zakari, M. (2017) found a relationship between the exchange rate and FDI in Pakistan. The Exchange Rate and FDI have a significant relationship that is positively correlated. The reasons are that even though Pakistan is a developing nation, it has abundant natural resources and lower labor costs. When the foreign investor wants to invest in Pakistani local currency, if the exchange rate is high, it implies the firm receives more currency for its investment. Hence, their research has demonstrated that the exchange rate has a favorable impact on foreign direct investment.

Furthermore, in the study of Bilawal M. et al. (2014), the correlation results indicated a significant positive relationship between the exchange rate and foreign direct investment. In contrast, the regression analysis indicated a value of R-square = 0.679, showing that the independent variable Exchange rate has a 67 percent impact on the dependent variable Foreign Direct Investment.

Moreover, M. Lim's (2013) study analyzes the determinant of Gross Domestic Product affecting the FDI inflows. Using the OLS regression model, the researcher has concluded that trade Gross Domestic Product was an insignificant indicator. Mamba et al. (2020), Industrialization and manufacturing, and overall industry value added have positive but insignificant effects on FDI. Industry Value Added (IVA) may not directly relate to FDI inflow but could still indirectly influence it by impacting these other factors.

Lucagbo's (2018) study findings state that Industry Value Added (IVA) is an insignificant factor in FDI inflows into the country. In addition, macroeconomic factors such as GDP growth, exchange rate, and inflation rate are more likely to impact FDI inflows than industry-specific characteristics. Furthermore, the relationship between IVA and FDI inflow is complex and influenced by many factors. Thus, IVA and real GDP growth may not be the most fundamental factor in determining FDI inflow; they can still play a role in attracting foreign investment to a particular country or industry.

4. Conclusions and Recommendations

4.1 Conclusions

Researchers generate results by identifying and assessing the relationship between independent and dependent variables using ordinary least squares regression analysis (OLS). Based on the presented data, the real exchange rate is the only determinant that significantly affects foreign direct investment (FDI) inflows. In contrast, the two remaining determinants have no significant effect.

Furthermore, Foreign Direct Investment is fundamental to the growth and progress of any country. It is vital, particularly in emerging and developing nations. For

the Philippines, foreign direct investments are instrumental to the country's development and GDP growth rate. From the findings, the study concluded that among the three determinants of FDI, the real exchange rate significantly affects the inflows of FDI in the Philippines. To maintain positive correlation, monitor and improve policy regarding the conservation of natural resources, a highly skilled workforce, advanced technology, a strong economy, and a stable political environment (Zakari, M. (2017).

4.2 Recommendations

Attracting foreign direct investment (FDI) is a significant step-strategy for promoting economic growth and development. Based on the findings, the researchers presented the following recommendations and conclusions: the researchers recommend that future policymakers and researchers take an interest in the following activities to attract significant investments that lead to economic progress. The Philippine government should be concerned with these determinants.

Furthermore, although GDP was insignificant in the study analysis, the host country's real GDP growth performance is still a significant factor influencing investors' confidence. As a result, the government should seek methods to support local production and expand employment, as both activities would help GDP growth. Also, strengthens and preserves natural resources as it attracts FDI from multinational companies seeking to access and use these assets. Due to the availability of such resources, foreign investors can establish businesses in the host country, extract or process the resources, and export them to different markets. Finally, invest in infrastructure; excellent infrastructure plays a crucial role in attracting FDI. It allows for efficient movement between goods and people, lowers manufacturing costs, and increases the economy's competitiveness.

Conflict of Interest Statement

The authors declare no conflicts of interest.

About the Author(s)

Jesson Rey F. Sabado holds a degree in master's in Business Administration and is currently an Associate Professor I at the College of Business Administration Education, University of Mindanao, Bolton Campus, Davao City, Philippines. Research fields of interest are financial economics, financial management, project evaluation, and strategic management.

Precious Grace Angelika T. Garcia holds a degree in Bachelor of Science in Business Administration major in Financial Management and graduated at the University of Mindanao, Davao City, Philippines.

Jonica B. Formentera holds a degree in Bachelor of Science in Business Administration major in Financial Management and graduated at the University of Mindanao, Davao City, Philippines.

Glydelyn S. Arcebal holds a degree in Bachelor of Science in Business Administration major in Financial Management and graduated at the University of Mindanao, Davao City, Philippines.

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