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The Relationship of Foreign Direct Investment and Unemployment Rate in the Philippines

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Abstract

Unemployment is widely recognized as a crucial indicator of the country's labor market performance and is known to be one of the most important problems in developing countries. On the other hand, foreign direct investment is known to significantly impact the country's economy as it directly creates additional jobs in the local economy and indirectly increases local spending because the new employees purchase products and services. This study was conducted to determine the relationship between foreign direct investment (inflows and outflows) and the unemployment rate in the Philippines and to present its trend from the period 1980 to 2019. Data on foreign direct investment and unemployment rate in the Philippines from 1980-2019 were sourced from International Labour Organization published by the World Bank. The Ordinary Least Squares (OLS) regression analysis was used to analyze and determine the relationship between foreign direct investment and the unemployment rate in the Philippines. Results revealed that the foreign direct investment outflows variable significantly affects the unemployment rate, with p-values lower than the 5% significance level. Thus, this paper offers decision-makers and policy-makers ample information to make informed decisions about the foreign direct investment and unemployment rate in the Philippines.

Keywords: Foreign direct investment, unemployment rate

1. Introduction

1.1 Background of the Study

According to the International Labor Organization (2019), unemployment is widely recognized as a crucial indicator of the performance of a country's labor market and the capacity of the economy to create good jobs for people who are looking for work. In addition, unemployment is widely acknowledged to be one of the most significant problems in nations that are still in the process of developing. People without jobs aren't the only ones who are adversely affected by unemployment; the economy as a whole feels the pinch as well. The length of time people are out of work and the total number of unemployed significantly impact the economic growth rate. On the other hand, it is common knowledge that foreign direct investment significantly affects a country's economy. FDI means "foreign direct investment," which refers to investments made by companies based in countries other than the United States. FDI boosts local employment by directly creating new jobs and indirectly increasing local expenditure thanks to new employees' increased demand for goods and services. Consequently, nations like the Philippines, which need increased national savings to fund economic development, depend on foreign direct investment (FDI).

Most developing Asian nations do not have the level of capital investment required for economic development and have per capita incomes in the middle class. To stimulate economic expansion and create more job opportunities, the emerging economies of Asia are making greater efforts to attract greater amounts of foreign direct investment (FDI). According to the findings of Nyuyen's

study (2022), developing Asian countries benefit from lower rates of unemployment when they increase their levels of direct foreign investment. Furthermore, the governance of these countries, the degree of economic openness, and the economic growth rate are important factors in determining unemployment rates.

The Philippines hopes to attract foreign investment to contribute to the economic recovery, advance economic development, increase employment, and support inclusive and long-term prosperity in certain regions. Recently, the government has begun enacting policies to encourage direct investment from overseas. Following the Corporate Recovery and Tax Incentives for Enterprises Act, the incentive framework utilized by each of the 14 investment promotion agencies (IPAs) will be standardized in the year 2021. The Philippine Economic Zone Authority (PEZA) and the Board of Investments (BOI) have retained their positions as the nation's premier IPAs as a direct result of the reform, according to the United States Department of State (2022).

According to a report published by the National Economic and Development Authority in 2018, it is anticipated that the current administration's aggressive promotion of domestic and foreign investments in the Philippines, particularly in important cities outside of Manila, will result in an increase in the flow of investments to Davao, particularly in the form of foreign direct investments (FDIs). Davao is currently attracting the interest of potential investors from various countries, including Japan, Russia, South Korea, China, Taiwan, Malaysia, Indonesia, Singapore, and Spain, amongst others. In 2015, 66 percent of the city's population consisted of people of working age, while 34 percent of the city's population comprised people who were considered dependent. In 2010, when 35 percent of the population was considered dependent, and 65 percent of the population was of working age, this scenario was essentially the same. In 2015, there were 1.9 million people in Region XI who had jobs, corresponding to a labor force participation rate of 94%; however, there were 118,000 people who did not have jobs, corresponding to a labor force participation rate of 6%. In a manner analogous, the unemployment rate in Davao City was recorded at seven percent (7%), while the labor force participation rate was ninety-three percent (93%).

Because unemployment is one of the most significant problems facing the Philippines currently, conducting this study is necessary. According to the International Labour Organization (2022), an economy's unemployment rate indicates its inability to offer jobs to people who want to work but fail to do so, despite being eligible for employment and actively looking for employment. This is the case even though these individuals are job-ready and actively seeking work. Consequently, it is considered an indicator of the health of the labor market and the efficacy and efficiency of a nation's capacity to absorb its workforce. According to Agbola (2022), the increased level of significant private investment in the Philippines has increased the country's absorptive capacity, which is necessary for foreign direct investment to be a useful tool for achieving economic growth. If there is a correlation between foreign direct investment and the unemployment rate, the general public would learn from this study that higher levels of FDI correspond to higher employment levels.

There may be a large number of studies investigating how foreign direct investment (FDI) affects the expansion of the economy in the Philippines; however, there are only studies examining how FDI is related to the country's unemployment rate. In light of this, an investigation into the connection between foreign direct investment and the unemployment rate in the Philippines is going to be carried out. The researchers intended to carry out this study because it is timely and significant. It is helpful to the government, policymakers, investors, and business owners when redesigning and developing existing strategies and policies to control and attract new capital in the form of foreign direct investment into the economy. This study was intended to be carried out because it is timely and significant. After all, it is helpful.

This study is limited to examining the relationship between the overall economic growth rate of the Philippines and the total net inflows and outflows of foreign direct investment (FDI) from 1980 to 2019. In conclusion, the findings of this study contribute to reliable information that can be used to facilitate the implementation of appropriate changes and to stimulate employability strategies to lower the unemployment rate in the country.

1.2 Objective of the Study

The study aims to determine how FDI (Foreign Direct Investment) (Inflows and Outflows) and the Philippines' unemployment rate are related. Its specific objectives are.

1). To demonstrate the relationship between foreign direct investments and the unemployment rate in the Philippines from 1980 to 2019 and;

2). To present empirical evidence to support that correlation.

1.3 Theoretical Framework

This research is based on Keynes' General Theory, which asserts that investment has a minimal impact on effective demand, the primary factor determining unemployment. According to John Maynard Keynes and other proponents of the Keynesian school of thought, unemployment happens when there is insufficient economic demand. This is the theory that underpins the Keynesian model. After all, there is a possibility that there will be less demand for production and, consequently, for labor if there is a decline in the demand for goods and services. Keynes also stated that the bust phase of the financial system is characterized by low aggregate demand and high unemployment. Pineda (2018). According to the findings of researchers Smith and Zoega (2009), employment rates would return to normal if the global economic system could enter the growth phase once more. The Keynesian concept of unemployment is the foundation for explaining cyclical unemployment because it describes the effects of standard shifts in the business and monetary cycles on the labor market. As a result, the Keynesian concept of unemployment serves as the foundation for explaining cyclical unemployment. In New Keynesian models, the establishments in the labor market determine the natural rate of unemployment and the rate at which unemployment adjusts to the natural rate. Investment is frequently overlooked as a critical variable at the root of the problem of excessive unemployment,

even though there is a strong empirical relationship between investment and unemployment.

1.4 Conceptual Framework

The conceptual framework shown in Figure 1 illustrates the variables that would be considered. The independent variable of this study is Foreign Direct Investment in the Philippines because it is the cause of the changes in the Unemployment Rate in the Philippines. The dependent variable is the Unemployment Rate in the Philippines because it changes depending on Foreign Direct Investment in the Philippines.

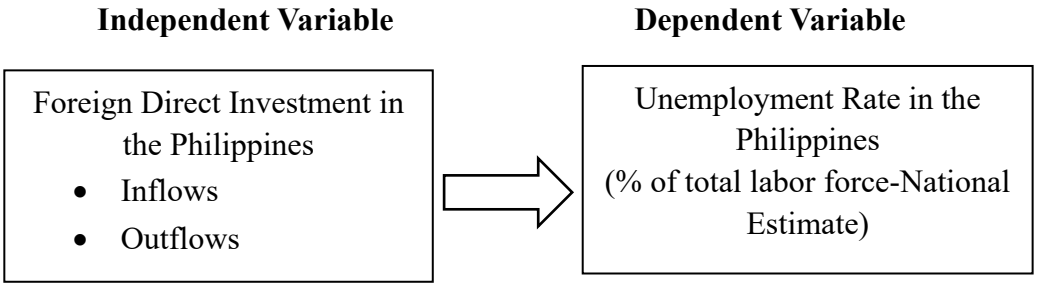

Figure 1. Conceptual Framework

1.5 Significance of the Study

This study benefits the following parties: policymakers, government, entrepreneurs, and future researchers. The result of the study provides input in redesigning and developing policies and strategies for the penetration of FDI in the country and to aid the unemployment rate. The government could further promote foreign investment programs and policies for unemployment assistance in the Philippines. The result of this study could be useful information where they can get helpful insights to make more informed decisions in improving their operations and expanding businesses. The researchers can use this study as a source of information and a basis for conducting their study about the relationship between FDI and the unemployment rate in the Philippines and other related studies.

2. Method

2.1 Data Source

Secondary data obtained from the International Labour Organization and published by the World Bank were utilized in the research project to guarantee the study's credibility and reliability. Censuses, information gathered by government agencies, organizational records, and data collected for other research are all secondary data sources. Renner (2022). The researchers collected data on foreign direct investment net inflows and net outflows, as well as the unemployment rate in the Philippines from 1980 to 2019. Because using high-frequency data

results in more precise volatility estimation and, as a result, more precision in risk-return relationship research, the period of time covered by the study was forty years. Studies show that this is the case. Gregorio (2015).

The considered variables of the study are measured as follows: The unemployment rate is measured in percentage (% of total labor force-National Estimate), Foreign Direct Investment is measured in net inflows (% of GDP), and Foreign Direct Investment is measured in net outflows (% of GDP).

2.2 Research Design

This study used inferential statistics to investigate the connection between foreign direct investment and the unemployment rate. The information that was collected could be quantified and was representative of the whole population. This study makes use of a quantitative approach to research as its methodology. According to Creswell (2013), quantitative research methods are concerned with objective measurements and statistical, mathematical, or numerical analysis of data obtained via polls, questionnaires, and surveys, as well as using computational methods to modify pre-existing statistical data. In addition, quantitative research methods use methods to modify pre-existing statistical data. In addition, it focuses on collecting numerical data and interpreting that data across groups of people or in the context of explaining a particular phenomenon.

2.3 Economic Model

The economic model to be used would be the following form:

$$Y = (X_1, X_2)$$

Where;

Y = Unemployment Rate

X_1 = Foreign Direct Investment Net Inflows

X_2 = Foreign Direct Investment Net Outflows

The data was analyzed using the Ordinary Least Squares (OLS) regression. It is a statistical tool that minimizes the sum of squared errors to assess the connection between one or more independent variables and a dependent variable. If the following criteria are fulfilled, OLS is the best linear unbiased estimator (BLUE):

a.) $E(\varepsilon) = 0$

This implies that the mean of the error terms is zero.

b.) $Var(\varepsilon) = \sigma^2$

This is the property of homoscedasticity, i.e., the errors have a common variance.

c.) Cov (ε_i, ε_j) = 0 where I ≠ j.

This is a property of no autocorrelation, meaning no errors are serially correlated. The economic model (1) would be transformed into an empirical model through regression analysis to explain the relationship between the independent and dependent variables, ceteris paribus Hill et al. (2000). The OLS estimator is consistent when the regressors are exogenous. There is no multicollinearity, and it is optimal in the class of the best linear unbiased estimators (BLUE) when the errors are homoscedastic and uncorrelated Stewart (2016).

Multicollinearity, heteroscedasticity, and autocorrelation emerge when assumptions are violated. Furthermore, as the number of variables in the model grows, there is a risk of multicollinearity, which occurs when one variable is connected to another. There is no guarantee that the data would be "rich in information" or that the economic relationship or parameters of interest will be able to be isolated Hill et al., (2000). Observations follow a natural order flow across time when using time series data. There's always the chance that subsequent blunders would be correlated. The breach of the third assumption is autocorrelation, a correlation between errors. The exact statistic of Durbin-Watson (DW) could detect it. The DW statistics, D, is defined below;

$$D = \frac{\sum_{t=2}^{n} (\varepsilon_t - \varepsilon_{t-1})^2}{\sum_{t=1}^{n} \varepsilon_t^2}$$

Finally, violating the second assumption is a significant consideration in the heteroscedasticity problem. If such issues arise, the generalized least squares (GLS) approach should be used to identify and eliminate the source of the problems.

2.4 Empirical Estimation

Equation (1) is the basis for the model of the study. The empirical model would be expressed as:

$$URi = \beta 0 + \beta 1NI + \beta 2NO + \varepsilon i,$$

Where;

URi = Unemployment Rate

NI = Foreign Direct Investment Net Inflows

NO = Foreign Direct Investment Net Outflows

3. Results and Discussion

3.1 FDI Inflows

Inflows of foreign direct investment in the Philippines from 1980 to 2019 are depicted in Figure

2, which shows the trend of these investments. The Philippines experienced erratic levels of foreign direct investment (FDI). The rate of foreign direct investment reached its highest point in 1988 (2.17 percent). As a direct consequence of this, the Central Bank for Investment in Filipino Stocks was able to facilitate the conversion of the commercial banks' foreign liabilities into their total peso equivalent, at which point the liabilities could either be purchased on the secondary market at a discount or converted into their total peso equivalent. In 1988, debt conversions were responsible for an amount equal to $806 million, or eighty-eight (88%) of the total foreign direct equity investment. Aldaba (1994).

Nevertheless, a decrease occurred in the latter half of the 1980s and the beginning of the 1990s. As a consequence of this, businesses that invest in the Philippines face a great deal of risk. According to the findings of numerous international studies, the notoriously inefficient and corrupt bureaucracy of the Philippines has been (and continues to be) a significant obstacle in the country's efforts to attract foreign investment. Bjorvatn et al., (2001).

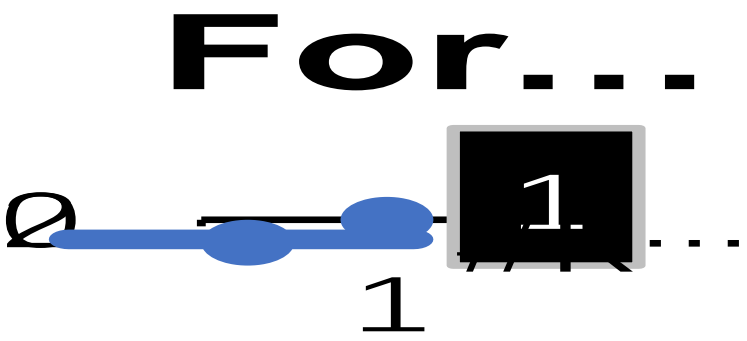

Figure 2. Foreign Direct Investments Net Inflows

According to research conducted in Austria in 1998, indicators of the investment boom that occurred in the latter half of the 1990s include a significant rise in the overall project cost of Board of Investment (BOI) -approved domestic and foreign investments, as well as a rising ratio of FDI to GDP. Both of these trends can be traced back to the late 1990s. The decade of the 1990s saw several developments that significantly impacted the general environment for domestic investment and boosted the faith of international investors in the economy. The removal of many restrictions on the flow of foreign exchange; the general policy of openness, which saw tariffs and other trade barriers reduced; and the declining inflation rate. The growth of areas (especially services and infrastructure) opened for foreign investment, the removal of many restrictions on the flow of foreign exchange, and the general policy of openness. The average interest rate on Treasury Bills dropped from 21.50 percent in 1991 to 13.10 percent in 1997 due

to restrictive monetary policies. These same policies also caused the average interest rate on savings bonds to drop from 16.50 percent in 1991 to 5.10 percent. In 2017, foreign direct investment reached a record high of 3.12 percent of total inflows. This is a direct consequence of the Build, Build, Build program that was implemented during the prior administration. As a result of this program, the real estate industry would have access to previously unavailable options, boosting investor confidence (Pinnacle, 2017). According to Dela Paz (2018), the amount of foreign direct investments (FDIs) entering the Philippines increased to $8.7 billion during the first eleven months of 2017, exceeding the full-year target of $8 billion set by the Bangko Sentral ng Pilipinas (BSP).

Since the 1990s, the Philippines has been working to increase foreign direct investment (FDI) and participate in the global value chains of multinational corporations by enacting various reforms. In tandem with trade liberalization, adjustments were made to investment policy to open up additional markets to participation from overseas investors. Investment promotion initiatives such as income tax holidays, the duty- and tax-free importation of capital goods and raw materials, income tax reductions for exporters after the income tax holiday, and the creation of enclosed economic zones all contributed to increases in foreign direct investment (FDI). However, FDI inflows into the Philippines have been limited because the country's performance in foreign direct investment (FDI) has lagged behind that of other Southeast Asian nations. FDI as a percentage of GDP increased gradually throughout the 1980s and 1990s, rising from 0.90 percent to 1.80 percent each decade before leveling off at 1.40 percent between 2000 and 2009 and 1.50 percent between 2010 and 2019. Beginning in the 1980s at a rate of less than 1 percent of GDP, Vietnam's Foreign Direct Investment (FDI) ratio has performed admirably, reaching 5.90 percent from 2010 to 2019 Aldaba (2022).

3.2 DFI Outflows

The Foreign Direct Investment (FDI) outflows from the Philippines are depicted in Figure 3 from 1980 to 2019. It displayed behavior that was, for the most part, consistent from the 1980s until the late 1990s. The year 2000 marked the year FDI Outflows fell to their all-time low of -0.75 percent. In the aftermath of the Asian financial crisis, significant investments fled the Philippine economy. The fundamental policy of economic liberalization, which was the hallmark of that time period, was kept in place at the beginning of the 2000s. Despite the widespread unrest that occurred in the early 2000s, the Philippine economy demonstrated a certain amount of resilience. The majority of growth in the 2000s was driven by rising private consumption expenditures, which were greatly aided by remittances from foreign workers, according to the Asian Development Bank (ADB) (2003).

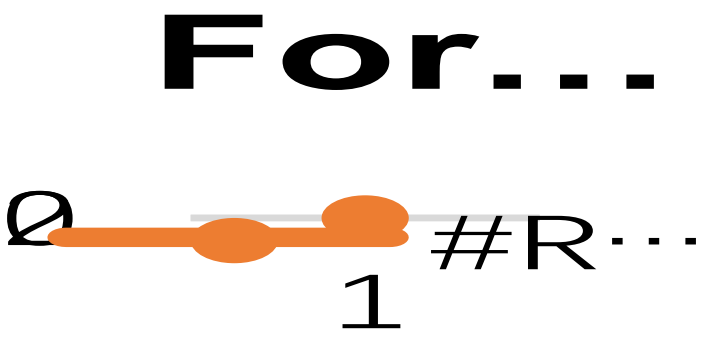

Figure 3. Foreign Direct Investments Net Outflows

The year 2000 has brought to light many of the ongoing policy challenges the government faces, such as graft and corruption, inefficient revenue collection, and inadequate infrastructure. However, over the subsequent seven years, there was a 3.44 percent increase in exported FDI. According to Pardalis et al. (2007), the reason for this was typically favorable weather. This, along with the ongoing use of premium seeds and organic fertilizers, upgraded agricultural facilities, and innovative drought-response tactics, all contributed to the growth of the agricultural industry by 5.10 percent in 2007 as opposed to 3.80 percent in 2006. Agriculture contributed less to the overall economic growth. The decline in domestic investment continued, reaching 15.60 percent of GDP in 2002. This was the lowest level seen since the middle of the 1990s, and it was the weakest performance among the major ASEAN economies, according to the Asian Development Bank (2003). The share of FDI in GDP began to fall in the early part of the new millennium and eventually settled at 5.70 percent, according to the IMF (2007).

By 2019, FDI outflows were 0.89 percent due to the COVID-19 crisis. Foreign direct investment (FDI) inflows and outflows worldwide were recovering in 2019, with inflows reaching US $ 1.5 billion and outflows reaching US $ 1.3 billion UNESCAP (2020). However, given the rising uncertainties affecting the investment environment, global flows are anticipated to decrease and remain low with the COVID-19 pandemic Aldaba (2022).

3.3 Unemployment Rate

Figure 4 presents the trend of the unemployment rate in the Philippines covering the years 1980 to 2019. Throughout the decade 1975-1986 under the Marcos government, the majority of Filipinos truly experienced a severe social crisis and economic hardship. A wave of protests and opposition to the dictatorship led to its overthrow in a popular revolt in February 1986. From 1966 to 1975, the early years of the Marcos rule, the unemployment rate declined. But this turned around in the Middle of the 1970s, rising quickly in 1980. With the inflation rate more

than tripling to 17.40 percent in 1980 from 7.10 percent in 1975, the cost of goods and services also increased. The most challenging years were between 1981 and 1985 when the unemployment and inflation rates continuously increased IBON Foundation (2017). Inadequate job creation in industry, a history of poor economic policies, a fast pace of population increase, and a lack of access to land all contributed to significant unemployment and underemployment in service sector occupations in the late 1980s Dolan (1991).

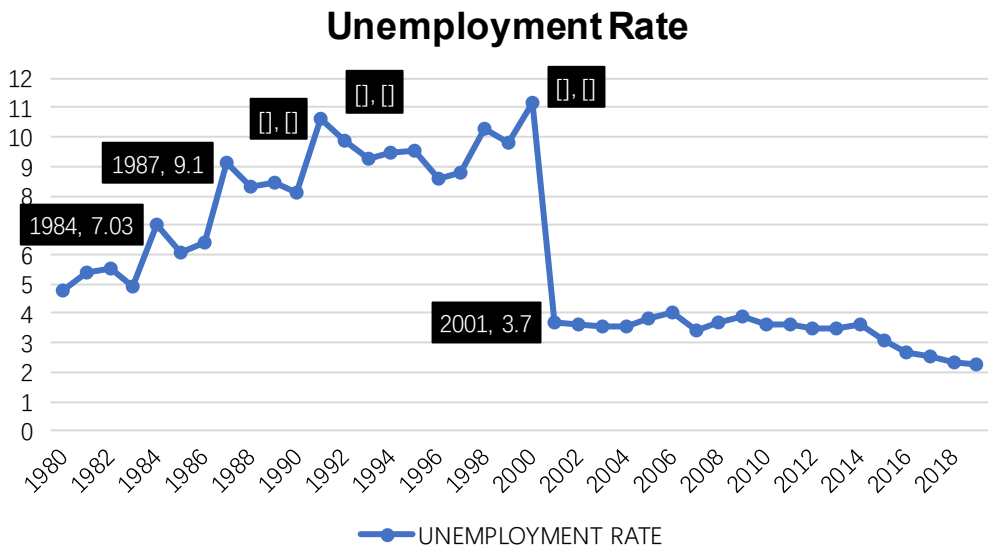

Figure 4. Unemployment Rate

Figure 4. Unemployment Rate in the Philippines % of total labor force-National Estimate The Philippine economy's enduring issue is familiar to developing nations following an export-led growth model. In particular, the price of oil has boosted import costs. A significant recession in the industrialized countries at the beginning of the 1980s and a reduction in global trade reduced the demand for Philippine goods. The deficit in the balance of payments increased steadily as a result. Rising interest rates and new protectionist laws in industrialized nations worsened a severe debt problem. Corruption and financial mismanagement are factors added to these external issues. In 1984 and 1985, the actual gross national product declined. Also, fifty (50) percent of industrial capacity was not being used, and the nation estimated $27.8 billion in total foreign debt in 1987. This economic downturn made the nation's high rates of infant mortality, widespread hunger, dropping actual earnings, and high unemployment even worse Rosenberg (1987).

Figure 4 shows the Philippines' unemployment rate. The national estimate of the percentage of the workforce The persistent problem with the Philippine economy is one that developing countries with an export-led growth model are familiar with. Oil costs, in particular, have

increased import costs. The demand for Philippine goods decreased due to a severe recession in the industrialized nations at the start of the 1980s and a decline in international trade. As a result, the balance of payments deficit steadily grew. Rising interest rates and new protectionist laws in industrialized countries worsened a serious debt problem. These external problems are exacerbated by corruption and financial mismanagement. The actual gross national product fell in 1984 and 1985. Furthermore, only fifty percent (50%) of industrial capacity was being utilized, and in 1987, the country had an estimated $27.8 billion in total foreign debt. The nation's high infant mortality rates, widespread hunger, declining real earnings, and high unemployment rates were worsened by this economic downturn (Rosenberg, 1987).

While the Arroyo Administration succeeded in increasing the number of jobs created by the economy from only 707,000 in the years 1990–1999 to an average of 1.1 million in 2001. The 1.7 million jobs reported for the aforementioned year might only be a restoration of the disproportionately large number of jobs lost in 2000 when the country was engulfed in another political and economic crisis. The State of the Nation Address of President Gloria Macapagal Arroyo listed creating jobs as one of her five major reform initiatives. The government expects to generate 6 to 10 million jobs over the next six years by tripling small business loans (from one million to three million micro, small, and medium firms) and developing two million hectares of agricultural land. The strategies have a lot of potentials because SMEs currently account for seventy (70) percent of all employment and thirty-two (32) percent of the GDP. They can create more jobs by improving their financial access and addressing the numerous problems they face regarding technology, R&D, and the growth of human resources. Given that 39% of the unemployed lived in rural areas in 2002, it makes sense to focus on agriculture to increase job creation Rubio (2004).

The estimated coefficients generated using the Ordinary Least Square (OLS) regression analysis are presented in Table 1. Results revealed that the FDI outflows variable significantly affects the unemployment rate, as indicated in their p-values lower than the five (5) percent significance level.

3.4 Regression Analysis

The estimated coefficients generated using the Ordinary Least Square (OLS) regression analysis are presented in Table 1. Results revealed that the FDI outflows variable significantly affects the unemployment rate, as indicated in their p-values lower than the five (5) percent significance level.

Table 1. OLS Regression Analysis Results

Variable	Estimated Coefficient	Standard Error	P-Value
FDI Inflows	0.0650889	0.0552782	0.239^{NS}
FDI Outflows	-0.2650388	0.0491779	0.000**
CONSTANT	1.361409	0.0772559	0.000

Note. Significant at 0.05**.

Based on the model, FDI inflows have a positive coefficient sign. This implies that a one percent increase in the FDI Inflow will have a positive 6.50 percent increase in unemployment. In contrast, FDI outflows have a negative coefficient sign. A one percent increase in the FDI Outflows will have a negative 26.50 percent decrease in unemployment.

The findings are supported by Yueming's (2014) research. In his research utilizing the Hausman test, he discovered that additional variables influence the extent to which FDI affects unemployment, which may be advantageous for the country of origin. This statement is accurate because international relations increase GDP and decrease unemployment. In terms of the tertiary industry, Yueming's (2014) findings reveal that FDI outflows favor domestic employment, indicating they are suitable for fostering job growth in the home country. Most foreign direct investment (FDI) outflows from the tertiary sector go to the business services, finance, and architecture industries, and all three industries significantly impact domestic employment. As globalization advances, the tertiary sector contributes more and more to employment growth. Consequently, FDI outflows will increase domestic engagement by increasing the demand for home-country workers in architecture, wholesale, and retail industries. And based on the estimated results of the model, FDI outflows from the tertiary sector can contribute significantly to job creation in the home country.

The same conclusions were reached in Lageweg's (2018) study, which examined the impact of outward FDI on employment in developed nations between 2005 and 2011. This study uses panel data from 2005 to 2011 for a sample of twenty-four developed countries. Results revealed that FDI outflows positively affect employment, primarily because export services have increased.

Liu and Lu (2011) investigated the long-term correlations between external FDI and employment in China using data from 1982 to 2007, Johansen's cointegration method, and Toda and Yamamoto's Granger causality tests. The findings indicate that Chinese FDI abroad positively impacted domestic employment growth, especially in the tertiary sector. FDI outflows increase employment due to a rise in service exports. This suggests that most jobs created by FDI outflow are concentrated in the service sector. The Effect of Outward Foreign Direct Investment on Home-Country Employment in a Low-Cost Transition Economy, a study by Masso, Varblane,

and Vahter (2008), found that FDI outflows have a positive effect on the growth of home-country employment, with services firms demonstrating a more significant impact than manufacturing firms.

According to Strat et al. (2015), Malik (2019), and Mkombe et al. (2020), there is no empirical evidence that FDI inflows have a significant impact on unemployment. Strat et al. (2015) used the Toda-Yamamoto method to examine the thirteen most recent EU members from 1991 to 2012. Similarly, Malik (2019), who employed the one-step GMM Arellano-Bond estimator for a sample of 54 three-digit industries from the Annual Survey of Industries between 2008 and 2016, does not view FDI as the primary strategy for creating jobs in India's manufacturing sector. Mkombe et al. (2020) utilized the FGLS (Feasible Generalized Least Squares) for six SADC nations between 1994 and 2017. As greenfield FDI creates more jobs than mergers and acquisitions FDI, Mkombe et al. (2020) conclude that FDI inflows have no effect on youth unemployment in the SADC region.

This study was conducted between 1980 and 2019 to determine the relationship between FDI and the unemployment rate in the Philippines. The impact of foreign direct investment on the unemployment rate in the Philippines is negligible. It has a p-value of 0.24, greater than the significance threshold of five percent (5%), making it insignificant. Moreover, the unemployment rate rises by 6.50 percent for every 1 percent increase in FDI inflow. FDI Outflows can have a significant indirect effect on the unemployment rate in the Philippines. Its p-value of 0.00 is less than the five percent (5%) significance threshold. Furthermore, the unemployment rate decreases by 26.50 percent when FDI outflows increase by 1 percent.

4. Conclusion and Recommendation

4.1 Conclusion

The result of the study revealed that Foreign Direct Investment, specifically the FDI outflows, significantly affects the unemployment rate in the Philippines. FDI outflows have a p-value less than the five (5) percent significance level. This can be supported by the works of Yueming (2014), who reveals that there are more factors to the FDI outflows effect on unemployment and potentially beneficial to the country of origin. This assertion is valid since international relations boost GDP and lower unemployment. In his study, he further found that in terms of tertiary industry (service sector), FDI outflows positively impact domestic employment, indicating that FDI outflows are beneficial for job creation in the home country. FDI outflows will increase domestic work by increasing demand for workers from home countries in architecture, wholesale, and retail industries.

Lageweg (2018) study produced the same results, showing that FDI outflows benefited employment primarily because of increased export services. Additionally, the findings of the study conducted by Liu and Lu (2011) show that outward FDI from China had a favorable impact on the increase of employment in the home country, particularly in the tertiary industry.

Because service exports are increasing, FDI outflows lead to a rise in employment. This suggests that the jobs generated by FDI outflow are most likely concentrated in the service industry. Furthermore, the results of the study by Masso, Varblane, and Vahter (2008) show that outbound FDI has a favorable impact on the increase of domestic employment, with services firms showing a more substantial benefit than manufacturing enterprises. Thus, this study offers decision-makers and policymakers ample information to make informed decisions about foreign direct investment and the unemployment rate in the Philippines.

4.2 Recommendation

The following recommendations are made based on the findings and conclusions. Policymakers should improve and formulate more robust policies and regulations relating to FDI outflows to create more job opportunities. The government should encourage more FDI outflows to increase the demand for labor forces. Entrepreneurs should consider expanding their businesses in national and international markets to boost GDP and lower unemployment. Future Researchers should further analyze the relationship between FDI and unemployment by industry or sector.

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Appendixes

Appendix A. Philippine FDI Net Inflows and Outflows 1980-2019

Year	FDI Net Inflows	FDI Net Outflows	Year	FDI Net Inflows	FDI Net Outflows
1980	-0.288	0.233	2000	1.777	-0.751
1981	0.425	0.116	2001	0.963	0.539
1982	0.038	0.145	2002	2.098	0.346
1983	0.278	0.072	2003	0.565	0.349
1984	0.025	0.042	2004	0.623	0.508
1985	0.034	0.166	2005	1.549	0.739
1986	0.374	0.032	2006	2.121	0.837
1987	0.812	0.14	2007	1.871	3.444
1988	2.169	0.037	2008	0.738	1.085
1989	1.16	0.019	2009	1.173	1.078
1990	1.049	0.044	2010	0.514	1.302
1991	1.051	0.052	2011	0.857	1.003
1992	0.377	0.167	2012	1.228	1.593
1993	1.996	0.603	2013	1.316	1.285
1994	2.175	0.413	2014	1.929	2.270
1995	1.746	0.471	2015	1.84	1.808
1996	1.603	0.192	2016	2.599	0.752
1997	1.299	0.145	2017	3.122	1.006
1998	3.07	0.215	2018	2.868	1.187
1999	2.136	0.835	2019	2.301	0.889

Source: Philippine FDI Net Inflows and Outflows 1980-2019

Appendix B. Philippine Unemployment Rate 1980 – 2019

Year	Unemployment Rate	Year	Unemployment Rate
1980	4.75	2000	11.19
1981	5.36	2001	3.7
1982	5.5	2002	3.62
1983	4.89	2003	3.53
1984	7.03	2004	3.55
1985	6.07	2005	3.8
1986	6.43	2006	4.05
1987	9.1	2007	3.43
1988	8.34	2008	3.72
1989	8.42	2009	3.86
1990	8.13	2010	3.61
1991	10.6	2011	3.59
1992	9.87	2012	3.5
1993	9.29	2013	3.5
1994	9.48	2014	3.6
1995	9.53	2015	3.07
1996	8.56	2016	2.7
1997	8.78	2017	2.55
1998	10.25	2018	2.34
1999	9.81	2019	2.24

Source: Philippine Unemployment Rate 1980 – 2019