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Factors Affecting Emigration in the Philippines

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Abstract – *This study was conducted to determine and examine the factors affecting emigration in the Philippines. Secondary data coming from World Bank, International Monetary Fund (IMF), and Commission on Filipino Overseas (CFO) were utilized in the research. The time frame of the study is 27 years, from the period of 1990 to 2016. In order to address the primary concern of the study, the Ordinary Least Square Regression Analysis (OLS Method) was employed using the statistical software packages, Gretl and STATA. The findings disclosed that for the past 27 years, Philippines' total number of emigrants had an upward trend. Also, based on the obtained data, the country's exchange rate, GDP per capita, migrants' remittance inflows, and tax rate have increasing trends. On the other hand, inflation rate and unemployment rate were found out having decreasing trends. Moreover, the analysis unveiled that the emigration in Philippines is positively related with exchange rate and migrants' remittance inflows. Thus, these two factors are statistically considered as push factors of emigration in the country. The variables found to be negatively related with emigration are tax rate, and unemployment rate therefore, pulling Filipinos to remain in the Philippines. It was further found out that the country's emigration is not significantly affected by inflation rate. Based on the research results, it is important that migration policies concerning the protection of Filipino emigrants should be further strengthened. Meanwhile, the government should provide investment guidance such as investment in the shape of remittance to Filipino emigrants which will encourage growth in the micro level as well as in the economy as a whole.*

Keywords – *emigration, Ordinary Least Square Regression Analysis, Philippines, pull factors, push factors*

INTRODUCTION

It cannot be denied that migration has greatly influenced the nature of the world we live in and continues to do so up to this present time. In fact, according to Department of Economic and Social Affairs, United Nations (2017), there are now an estimated of 258 million people living in a country other than their country of birth which reflects an increase of 49% since the year 2000.

Migration is generally defined as the movement of people from one place to another. According to Millipedia, people have always moved from one country or area to settle in another. They tend to migrate from the homes of their families into their own. They migrate between cities and towns and they also migrate between countries.

Defining the concept of migration is difficult because it includes people who move for different cases across different spaces. A person can be considered as a migrant if he/she moves to another city or town within a nation, crosses an international border to escape religious or political persecution, moves to another country to look for better economic opportunities, is forcibly moved from his/her own home, or is displaced by war or natural disaster. Migration occurs under different circumstances that is why demographers lack a single, operational definition for it.

The relative movement of people when the boundaries cross are international is widely recognized as emigration and immigration. The former refers to the relocation of people from one country in order to permanently or temporarily live in another. It is the same process as the latter which is the influx of people from another country. The difference between the two is the point of view. Both types of relocation are part of the process called migration. One emigrates from a nation (moves out from a country), whereas one immigrates to a nation (moves in to a country) (Cloud, n.d).

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People move because of different reasons which affect the overall migration process. Although a comprehensive theory is ideal, it still remains a crucial task of demographers to explain why people tend to migrate. Theories of migration are imperative because they are applied to understand population movements.

Over the past seventeen years, the volume of international migrants worldwide has continued to grow. In 2017, UN DESA (2017) reported that globally, the twenty largest countries of origin account for almost half of all international migrants while one-third originates in only ten countries. The country with the largest volume of people living in another is India accounting to 16.6 million individuals. Meanwhile, the origin of the largest number of people who are living outside their region of birth is Asia. In 2017, 42 million international migrants born in the said continent but residing in another country was recorded. Most of these international migrants were living in Europe, Northern America, and Oceania accounting to 20 million, 17 million, and 3 million respectively.

In the Philippines, moving abroad has become common, acceptable, and even desirable option to obtain a better life because of deeply rooted and pervasive culture of migration. For decades, numerous Filipinos have left their homes to search for permanent settlement or temporary work in foreign country. In 1970s, a large-scale of labor emigration began in the country. As the country could not provide jobs and decent wages and as economic gains could not keep up with population growth, the migration was further fueled. Specifically, lack of sustained economic development, unabated population growth, political instability, persistent unemployment, and low wages were the factors which compelled Filipinos to move abroad (Asis, 2017). Furthermore, according to Commission on Filipino Overseas (CFO) (2015), family reunification is the primary reason why Filipino emigrants are migrating while others are marriage to foreign nationals or to find work overseas.

As the Philippines recorded an almost 2.3 million Filipino emigrants in 2016 (CFO, 2016), is the top 9 country around the globe having the highest number of emigrants living abroad (WorldAtlas, 2017), and is one of the major labor exporters in Asia and worldwide (Asis, 2017), the researchers endeavored to evaluate the factors affecting emigration of the said country. Moreover, the researchers intended to assess and analyze the relationship between emigration and the various economic factors affecting it. Specifically, these economic factors are exchange rate, GDP per capita, inflation rate, migrants' remittance inflow, tax rate, and unemployment rate. There are social, demographical, political, environmental, geographical, and economic factors that motivate individuals to move out from a country to another but this study is only delimited to economic ones.

This research used secondary data coming from various online sources including World Bank database, International Monetary Fund (IMF), and Commission on Filipino Overseas (CFO). Time series is the type of data utilized in this study. The time frame of this research is 27 years, from the period of 1990 to 2016.

Furthermore, this study will be an addition to the existing reservoir of literature on the factors affecting emigration. Specifically, the findings of this research were perceived to be beneficial and significant to the following stakeholders:

Government. The findings of this study will pave a way for the administration to predict future trends of emigration and will help them to create and provide productive investment schemes for the Filipino emigrants.

Policy Makers. The information and insights generated by this research will provide useful parameters that will guide policy makers to craft proper migration policies which will ensure well-managed migration of Filipinos.

Economy of the Philippines. The findings of this research will be crucial to the Philippines as the trends of emigration pose positive and negative effects to the economy of the said country.

Students. This research will help students acquire deeper and significant knowledge that is imperative to understand a broad spectrum of emigration and the factors affecting it. This will arouse them to carry out the same study and will motivate them to conduct more extensive research regarding other factors affecting emigration aside from economic ones.

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Future Researchers. This study will serve as a reference by providing useful findings to the students who will be doing a research related with this study.

OBJECTIVES OF THE STUDY

This study primarily endeavored to assess and analyze the factors affecting emigration in the Philippines from the period of 1990 to 2016. In order to have a better comprehension on how the covered period is affected by certain factors, this research sought to find the answers of the following research questions:

1. What is the trend of the Philippine emigration from the period of 1990 to 2016?
2. How do the following factors affect emigration trends in the Philippines from 1990 to 2016
   a. Exchange rate;
   b. GDP per capita;
   c. Inflation rate;
   d. Migrants' Remittance Inflow;
   e. Tax rate;
   f. Unemployment rate?
3. Is there a significant relationship between emigration and the factors affecting it?

A null hypothesis was formulated in this study which was tested at 0.10 level of significance. The null hypothesis is:

Ho: There is no significant relationship between emigration and the factors affecting it which are exchange rate, GDP per capita, inflation rate, migrants' remittance inflow, tax rate, and unemployment rate.

MATERIALS AND METHODS

The researchers used the descriptive-correlational type of research method and inferential statistical method to address the concerns of the study. The descriptive research method is primarily utilized to simply describe what the data show. It provides summaries about the samples and measures and furnishes simple graphical analysis to form the basis of every quantitative analysis of data while the correlational research method is designed to assess and quantify the relationship between the dependent and independent variables. Whereas, the inferential statistical method tries to formulate conclusions that extend beyond the immediate data alone and employs statistical treatment to test the relationship of the two variables being correlated.

To determine how the factors affect emigration trends in the Philippines, the researchers employed Ordinary Least Square Regression Analysis (OLS Method). OLS Regression Analysis is used to study the relationship between two or more variables. Moreover, the regression technique is utilized to observe changes in the dependent variable with changes in the independent variables.

The data needed were taken from the online sources which include World Bank database, International Monetary Fund (IMF), and Commission on Filipino Overseas (CFO). Specifically, the data of the Philippines in exchange rate, GDP per capita, inflation rate, migrants' remittance inflow, and tax rate were taken from the World Bank database while the data in unemployment rate were acquired from the International Monetary Fund database. The data of the country concerning emigration were obtained from the Commission on Filipino Overseas. Moreover, the gathered data were compiled in a single document as it were accompanied by unnecessary ones. The authenticity of the data was guaranteed as they were taken from reliable online sources. After obtaining the data from the internet, they were analyzed, interpreted, and presented in tabular or graphical, and textual form.

The first research question was purely descriptive and to answer it, secondary data coming from an online source were utilized. The trend of emigration in the Philippines from the period of 1900 to 2016 was determined with these data. The gathered data were presented graphically in linear chart form. Linear chart is the most appropriate type of graph in presenting the result of the first problem as it is used to display time series, to spot trends, or to compare periods. After the data were presented using linear chart, they were thoroughly interpreted.

The second research question was also purely descriptive and in order to address it, secondary data obtained from online sources were utilized to determine the trend of exchange rate, GDP per capita, inflation rate, migrants' remittance inflow, tax rate and unemployment rate of the Philippines from the period of 1900 to 2016. The gathered data were also presented graphically in linear chart form. After the data were presented using linear chart, they were exhaustively explained.

For problem number three, to determine the relationship between emigration and the factors affecting it, OLS Regression Analysis was used. Specifically, multiple linear regression was employed in this study as it is utilized to study the linear relationship between one dependent variable and more than two independent variables. Analysis was done using the statistical software packages, Gretl and STATA. Gretl was used to perform the OLS regression while STATA was utilized to determine the standardized coefficient as well as to know whether the employed independent variables are collinear to each other. The results were presented in tables and were comprehensively interpreted. Moreover, a scatter plot diagram was also ascertained to show the linear relationship between the dependent and independent variables.

The following formula was used to indicate the hypothesized relationship between the dependent variable which is emigration and the independent variables which are exchange rate, GDP per capita, inflation rate, migrants' remittance inflow, tax rate, and unemployment rate.

The functional form of emigration is:

$$E = f\,(ER, GDPPC, INF, REM, TR, UR)$$

Multiple linear regression was employed to determine which among the six independent variables can influence the emigration decision of Filipinos. The created model expresses the value of the emigration as a linear function of the six independent variables and an error term which is expressed by the following:

$$E = \beta_0 + \beta_1 (ER) + \beta_2 (GDPPC) + \beta_3 (INF) + \beta_4 (REM) + \beta_5 (TR) + \beta_6 (UR) + e$$

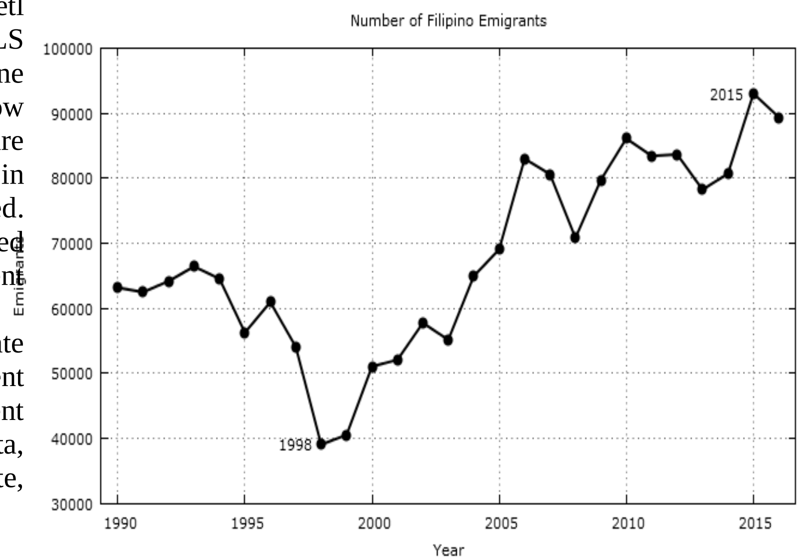
Where:

E = number of emigrants
β_0 = intercept
β_1 , β_2 , β_3 , β_4 , β_5 , β_6 = regression coefficients
ER = exchange rate
GDPPC = gross domestic product per capita
INF = inflation rate
REM = migrants' remittance inflow
TR = tax rate
UR = unemployment rate
e = standard error

Results and Discussion

PART I. Trend of Emigration in the Philippines

Figure 1. Line Chart of Filipino Emigrants from the period of 1990-2016



The line graph provides information about the number of Filipino emigrants in the Philippines from the period of 1990 to 2016. It reveals that in totality, for the past 27 years, Philippines experienced an upward trend with a highest point in 2015 and lowest in 1998.

As shown in the graph, for almost a decade (1990-1998), the country experienced a decreasing trend in which the lowest point is located in the year 1998 with a corresponding 39,009 number of Filipino emigrants - a substantial decrease relative from year 1997 with a corresponding 54,059. The reason for this substantial drop was the 1997-1998 Financial Crisis in Asia. The crisis started in Thailand with the collapse of the Thai baht in July 1997. It began as a currency crisis but immediately affected the wider economy and spread quickly to the remaining region, leading to economic downturns in several countries. According to Mijares (1999), there was a 0.7 percent decrease of Filipino contract workers deployed from January to July 1997 to the same period in 1998. The crisis has affected the deployment of Filipinos in Asia, which decreased by about 4.6%, mostly from Hong Kong and Malaysia. Moreover, as Saudi Arabia implemented its "Saudization" policy by hiring local workers instead of foreign ones, the deployment of Filipinos in the Middle East also declined by roughly 3.6%. According to Pernia & Knowles (1998), overseas Filipino migrant workers in Asian countries were severely affected by the crisis. Several migrant workers originated from various foreign lands had been forced to return back to their home countries.

However, in the period of 1999, analysts saw signs that the economies of Asia were starting to recover. After the crisis, economies in the region which were affected by the crisis worked toward financial stability and better financial supervision. Available jobs overseas began to exist which reflected the continued 4-year increase in the number of Filipino emigrants from the period of 1999 to 2002 wherein overseas employment in 1999 and 2000 only grew by less than 1% (Francisco, 2003).

In the year 2007 to 2008, a decline in the number of Filipino emigrants was recorded due to the recession - the worst since the Great Depression. The unemployment rate in the United States and other migrant receiving countries more than doubled. However, relatively few migrants left the countries in which they were residing even if they lost their jobs since the recession also reduced opportunities in their home countries. In support, according to Fix et. al. (2009), the recession in 2008 has dampened the movement of economic migrants to the major immigrant-receiving regions of the world. An economic recovery was then followed and in the year 2009 to 2010, a rapid increase of Filipino emigrants was recorded (Deluna & Darius, 2014).

Looking back at the graph, it is apparent that from the period 1999 to 2016, Philippines experienced an increasing trend in which the highest point is found in the year 2015 accounting to 92,998 emigrants. According to Commission on Filipino Overseas Statistics on Philippine International Migration (2015), the number of Filipinos leaving the country every year, in search for better life and opportunities abroad are elevating. Furthermore, CFO elaborated that majority of Filipino emigrants are permanently migrating for family reunification. Other reasons that contributed to the emigration decision of Filipinos are marriage to foreign nationals or to find job overseas. In addition, which is worth of noting is the CFO's report stating that Filipino emigrants are highly educated in which 49% are college graduates and 39% of them were professionals or technical workers prior to migration (CFO, 2015).

Emigration poses a significant effects to the sending and receiving country. According to Asch (1994), the economic effect of emigration on the sending countries suggests that emigration lessen unemployment in the source country and appears to raise the wage level of people who stay in the home country. With regards to whether a sending country loses as a result of the emigration of educated and skilled individuals or commonly know as brain drain, is the amount of human capital investment embodied in these emigrants is financed by the government. Furthermore, an important aspect of emigration is remittances which improve a country's balance of payments and help finance imports.

Additionally, according to Wimalaratana (2016), international migration has both its advantages and disadvantages when looking at the development perspective of a country. It is an argument that migration is a positive force for development. This is because it facilitates development for the receiving country by being able to acquire the required knowledge, expertise and services of unskilled workers especially the skilled ones. In contrast, the receiving country may also suffer due to unwelcome migrants moving in. On the other hand, the sending country may suffer from brain drain due to the heavy outflow of skilled labor, despite the receipt of remittances.

According to the CFO, the top 3 countries of destination of Filipino emigrants are USA, Canada, and Japan. This supports one of the laws of Ravenstein's Law of Migration which states that the major direction of migration is from agricultural to industrial or commercial centres. Philippines is an agriculturally-centered country while USA, Canada, and Japan are industrially-centered or commercially-centered ones. It also supports the World Systems Theory stating that migration is coursed by the movement of labor force from periphery to the central regions. Philippines is a poor country while USA, Canada, and Japan are rich ones.

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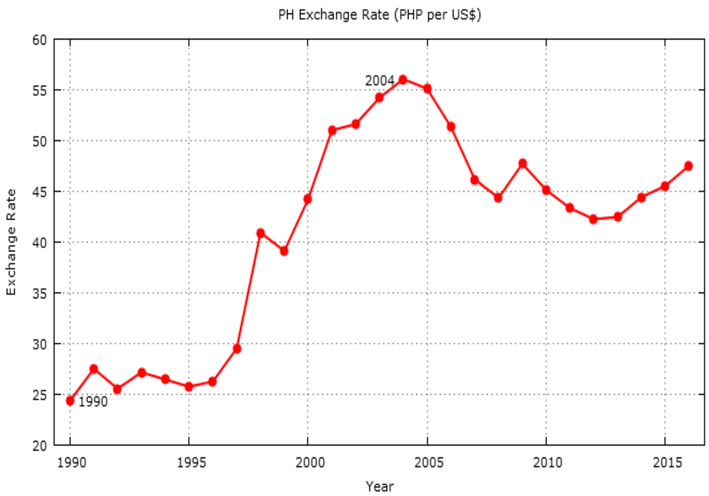
PART II. Trend of the Factors affecting Emigration in the Philippines

Figure 2.a. Line Chart of Philippine Exchange Rate from the period of 1990-2016



The line graph shows information concerning the exchange rate in the Philippines (PHP per USD) from the period of 1990 to 2016. The graph unveils that in totality, Philippines experienced an upward trend with a highest point in 2004 and lowest in 1990.

As shown in the graph, for almost a decade (1990-1997), Philippines maintained a gradual fluctuations in which the lowest point is seen in the period of 1900 with a corresponding value of PHP24.3105 per US$. Although the exchange rate is lower compared today, during 1990, the Philippine currency is already weakening against US currency. The depreciation of the Philippine peso against the US dollar during 1990's was due to the elimination of trade barriers, including the vigorous pursuance of trade liberalization as well as liberalization of the foreign exchange market by the Aquino administration (Paderanga, 2014). In 1990, the peso depreciated but recovered in 1992 after real interest rates rose again. In 1994, the peso appreciated but depreciated in 1996 as the Bangko Sentral ng Pilipinas relaxed monetary policy (Yap, 1996). Looking at the graph, the notable precipitous depreciation of peso in 1998 is facilitated by the Asian Financial Crisis in 1997-1998 (Nanto, 1998).

Apparently, the highest point which depicts that the Philippine currency is weakest against US currency is in the period of 2004 with a value of PHP56.0399 per US$. According to the 2004 Annual Report of the Bangko Sentral ng Pilipinas (BSP), this level was near the government's expectation of PHP54-56 per US$. The weakening of the value of Philippine peso in 2004 was caused by the increased in the dollar demand in the corporate sector during the year because of higher import requirements which was due mainly to the hike in world oil prices, foreign exchange obligations and hedging against future dollar requirements, particularly in light of the volatility in energy prices. The concerns over the country's fiscal situation and the surge in world oil prices, which fueled market fears of higher inflation and interest rates also contributed on the depreciation of the peso.

In the year 2005, Philippine peso started to continuously appreciate until the period of 2008. According to Department of Economic Research of Bangko Sentral ng Pilipinas, the reasons behind this were sustained dollar inflows from OFW remittances and portfolio and foreign direct investments, favorable investor sentiment due to the economy's strong macroeconomic performance, strong real GDP growth, low inflation rate, steady export earnings, net inflows of foreign portfolio investments which include investments in government securities, stocks and money market, net foreign direct investment inflows, and weakening of US dollar due to imbalances in the US economy.

Another peso depreciation was recorded in 2009 due to the full impact of the global financial turmoil and the continued risk aversion against emerging market economies (BSP, 2010). However, peso appreciated again because of structural and cyclical factors in 2010. Specifically, the country's favorable external payments position, which was driven by strong export performance, healthy inflow of overseas Filipinos' remittances, solid business process outsourcing (BPO) revenues and tourist receipts, the weakening of the U.S dollar against most currencies supported the peso to appreciate.

Bangko Sentral ng Plipinas (2018) stated that a weak peso improves the external price competitiveness of Philippine products which in result increases the country's export earnings. The

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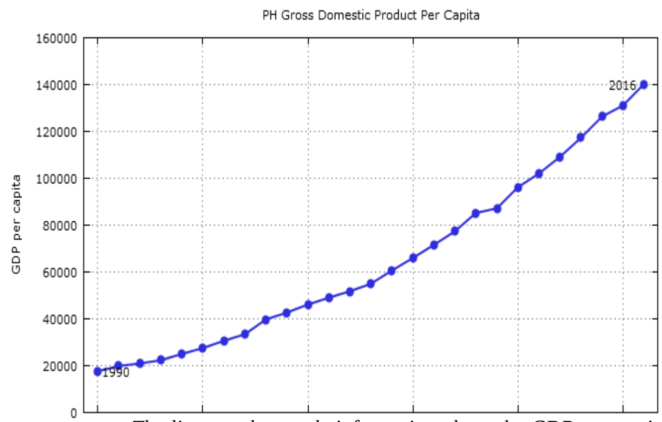
depreciation of the peso also means that every foreign currency remitted by an overseas Filipino in the country could translate into more pesos. Moreover, tourism and investment activities will increase as it will be less costly and more desirable for foreigners to travel and invest in the Philippines. However, the downside is that peso depreciation increases inflationary pressures as it would cost more pesos to buy imported products and raw materials such as oil and rice.

On the one hand, a strong peso provides benefits to the economy particularly the typical consumers, importers, Filipinos who travel or invest abroad, and those who pay for foreign loans including the government. Furthermore, a firm peso helps dampen inflationary pressures, leads to lower debt servicing, enables the Central Bank to build up international reserves, and allows prepayment of foreign exchange obligations. Conversely, peso appreciation have some negative impacts on certain sectors, including some export oriented companies, domestic producers of import substitutes, tourism sector, foreign investors, creditors who had lent money in foreign currency, as well as overseas Filipinos and their families.

According to the study of Sulaimanova & Bostan (2014), depreciation of local currencies leads to the fact that income received from abroad, when remitted, makes people wealthier, therefore serving as pushing factor to migrate. The study of Ullah (2012) also employed exchange rate and showed that depreciation of local currency results in higher streams of income from remittances which therefore, causes higher rates of emigration from Bangladesh.

Figure 2.b. Line Chart of Philippine GDP per capita from the period of 1990-2016

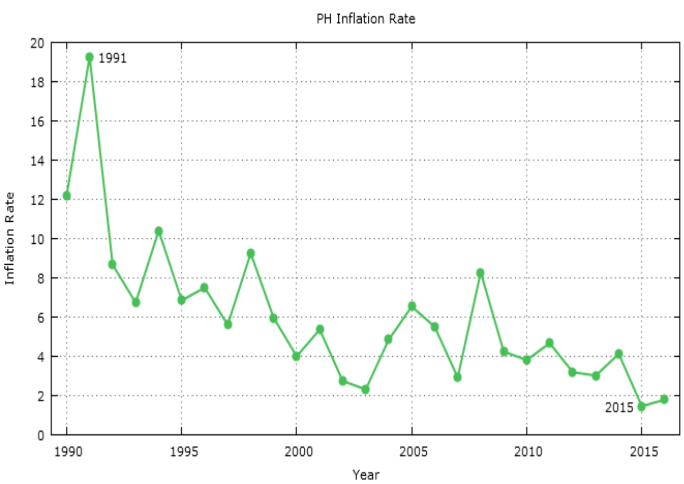


The line graph reveals information about the GDP per capita in the Philippines from the period of 1990 to 2016. The graph unveils that in overall, Philippines experienced an upward trend with a highest point in 2016 and lowest in 1990.

It can be seen from the graph that the lowest point is seen in the year 1990 with a value of 17389.56. On the one hand, the highest point is found in the period of 2016 accounting to 140146.28. It is clearly observable that Philippines maintained a sustained increasing GDP per capita for the past 27 years. It is due to macroeconomic stability that aided the Philippine economy shows a great deal of resilience through these years. Moreover, according to Mourdoukoutas (2018), numbers can be distorted by population growth and currency fluctuations. The climb in the GDP per capita of Philippines has been aided by a slow-down in population growth. In suppot, according to the Department of Budget and Management, although the economy faced global and domestic challenges, it is still a solid, healthy, and resilient country.

According to Ombaire (2016) study, improved GDP per capita results to increase in emigration. Specifically, it was found out that a percentage improvement in GDP per capita leads to 0.68% rise in emigration from Kenya. Ombaire elaborated that the finding can be associated by the weaknesses of using GDP as a measure of economic growth in developing countries namely; continued revisions in GDP, omission of some economic activities from GDP computation, and existence of illegal economic activities hence at times failing to be realistic and reliable. Ombaire added that the perceived high GDP per capita with relatively large inequality causes emigration. Furthermore, the increase in migration decisions is based on the person's intention to fulfill his/her aspirations and his/her awareness and access of information, and advanced education regardless of the prevailing sound economic conditions in the origin. On the contrary, Sulaimanova & Bostan (2014) and Sultana & Fatima (2017) studies revealed that a low level of per capita GDP in the country of origin encourages emigration implying that it affects migration negatively; the lower real GDP per capita is, the higher will be the emigration rate.

Figure 2.c. Line Chart of Philippine Inflation Rate from the period of 1990-2016



The line graph exhibits information regarding the inflation rate in the Philippines from the period of 1990 to 2016. The graph reveals that in overall, Philippines experienced a downward trend with a highest point in 1991 and lowest in 2015.

As shown in the figure, the highest point is found in the year 1991 with a corresponding 19.2615% inflation. On the contrary, the lowest point is seen in the period of 2015 accounting to 1.4337% inflation.

The 19.2615% inflation which is one of the highest rates ever recorded in the country, is due to the series of natural disasters the Philippines experienced in 1991 including the wake of a massive earthquake in northern Luzon in July 1990, a devastating typhoon in the central Visayas in November 1990, the eruption of Mount Pinatubo volcano in Central Luzon in early June 1991. In fact, this notable rate of inflation is known as the highest for the administration of Corazon Aquino (1986-1992) (Dolan, 1991).

It is then followed by a sharp decline in 1992 as the Philippine economy showed improvement in 1992, spurred by increases in agricultural production (Hays, 2015). However, in 1994, 1996 and 1998, inflation rate rose primarily due to price hikes in rice.

Looking back at the graph, although the inflation in 2001 had slightly increased, the Bangko Sentral ng Pilipinas stated that the year was marked by subdued price pressures due to favorable supply-side factors and moderate growth in both domestic liquidity and overall demand. In 2002, because of subdued demand-pull inflationary pressures as well as lower food prices, inflation rate declined.

Another increase in inflation is recorded in 2004 that is predominantly due to supply-side factors which is from a series of supply-side shocks to the economy. These shocks included the increase in global oil prices, translating into higher cost of transport services and other goods. Further, the spate of typhoons and domestic supply constraints that affected the availability of certain food products contributed to the increase (BSP, 2005). After the increase, the recorded inflation rate in 2006 decreased again. According to the Bangko Sentral ng Pilipinas (2006), price pressures during the year eased as the price increase of indices for food, beverage and tobacco and non-food items slowed down. Moreover, the recovery of agricultural production, the relative stability of the peso, and the absence of demand-based price pressures helped to ease inflation.

However, after the consecutive two-year decrease in inflation, price pressures accelerated in 2008 due to the boost of the global commodity price increases. In addition, supply constraints and low inventories, and build-up in demand pressures contributed to the price increase (BSP, 2008).

Inflation rate declined again in 2009 due to favorable developments in food and energy-related items (BSP, 2010). The low inflation was primarily because of favorable supply conditions, particularly the sustained growth in agriculture sector. Moreover, the strong base effects following the very high kerosene and LPG prices during the year resulted to negative fuel inflation. In addition, demand-related pressures appear to be limited during the year (BSP, 2009).

In 2011, inflation rate rose but still within the government's target range of 3 to 5 percent. According to the Bangko Sentral ng Pilipinas (2012) the increase was due mainly to higher inflation out turns for most food items, particularly vegetables and fish which reflected the agricultural damage brought by typhoons Pedring and Quiel that affected the country in the latter part of the year.

Looking back at the graph, the decline in inflation in 2012 was due largely to lower food prices, specifically vegetables and oils, which is from the ample domestic supply. Lower non-food inflation was also recorded during the period, supported by lower inflation for electricity, gas and other fuels (BSP, 2013).

After experiencing a consecutive two-year decrease, the country's inflation rate rose again in 2014. This was driven mainly by the higher prices of food because of the tight domestic supply conditions, triggered by weather-related production disruptions and supply-side factors (BSP, 2014).

Inflation rate decreased again in 2015 which is the lowest point from 1990 to 2016. As stated, the 1.4337% inflation in the year is largely due to the favorable supply-side factors including the relatively lower domestic retail prices of corn, oil, and rice, lower global oil prices, and the contraction in the prices of housing and other utilities. The generally low inflation is expected by the Philippine government and is below the target range of the Bangko Sentral ng Pilipinas (BSP) which is 2% to 4% inflation. In addition, this rate of inflation is marked as the lowest for the administration of Benigno Aquino III (2010-2016).

In 2016, inflation rate had slightly increased as the prices of both food and non-food commodities continued to increase which is driven by seasonal demand as well as the weather disturbances. Moreover, the price increased of non-food commodities is due to oil price increases during the last quarter of the said year (BSP, 2017).

It is not exactly true that inflation is an unmitigated ill for an economy. In fact, inflation has a variety of effects, its impacts can vary from person to another (Reed, 2017). Basically, when there is inflation, the purchasing power of every individual decreases. In layman's terms, this means that each currency such as peso can buy fewer goods and services than it could before.

Inflation incentivizes spending and deters saving pushing people away from hoarding cash and into more productive uses of their capital. Savings, specifically those kept in cash, lose value each year at the rate of inflation.

It also helps debtors and harms lenders. Typically, inflation works in favor of people who borrow money. Lending institutions do account inflation in their interest rates and they expect a certain erosion of the money over the duration of the loan.

Additionally, inflation can hurt foreign investment. Economists argue that it reduces foreign investment because inflationary cycles make an economy seem less reliable. Investors around the world lose faith that their money will be safe. Furthermore, they worry about the preservation of their own investment, and whether it will ultimately suffer from the same devaluation. Inflation also leads to higher interest rates. Interest rates tend to rise as banks and lenders adjust for the new value of the currency and as the government deliberately begins trying to cool down the economy (Reed, 2017).

Another positive result of inflation is that it can spur growth particularly in a consumer-focused economy as it increases consumer spending. It can drive spending in a consumer economy but it also increases prices reducing the value of that spending. It also erodes the assets of employers and producers hurting their ability to employ people.

According to the study of Ahmad et. al. (2008), migration is positively related with inflation rate in Pakistan. They concluded that people are driven to migrate for the sake of fulfilling their basic needs and that people from the low income segments of the society emigrate to foreign countries due to high inflation. Ahad (2015) investigated the relationship between migration and inflation. The result unveiled that inflation has positive significant impact on migration from Pakistan in long run. Ombaire (2016) examined the economic determinants of migration from Kenya to five OECD countries during the period 2000 to 2015 and also study

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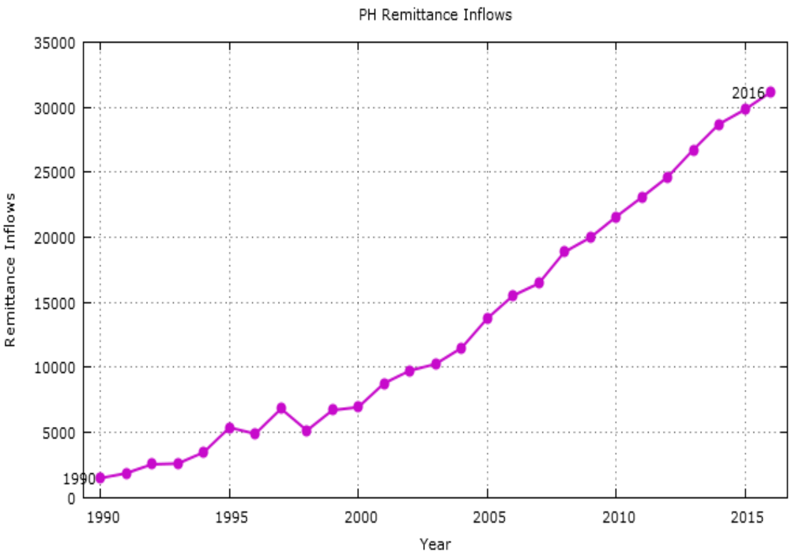
unveiled that high inflation is a significant push factor from Kenya.

Figure 2.d. Line Chart of Philippine Migrants' Remittance Inflow from the period of 1990-2016



The line graph shows information regarding the migrants' remittance inflow in the Philippines from the period of 1990 to 2016. The graph unveils that in overall, Philippines experienced an upward trend with a highest point in 2016 and lowest in 1990.

As shown in the graph, the lowest point is seen in the year 1990 accounting to 1465. On the contrary, the highest point is found in the period of 2016 with a value of 31145.

It is evident that the migrants' remittance inflow of Philippines have grown from 1990 to 2016. Remittances are well known to be a key component of the Philippine economy. The country actively encourages international migratory work and the government has a national agency dedicated to support and facilitates international migratory work and incomes (Light & Lewandowski, 2015). There were only two years when the recorded inflow of remittances recorded declined (i. e. 1996 and 1998) in which the decrease in 1998 is facilitated by the 1997-1998 Asian Financial Crisis.

It is worth of noting that Philippines registered as the third-highest total remittances in the world in 2017 according to International Monetary Fund. Only China and India had higher total remittance levels, 1st and 2nd respectively as these countries have much larger populations.

Remittances have been recognized as a key source of finance for some of the poorest countries in the global economy and have been acknowledged as an important developmental vehicle (Swing, 2018). There are many positive externalities of remittances including reducing poverty and inequality, increasing education opportunities for children, improving housing and sanitation, promoting entrepreneurship, and increasing tax revenues to government. Moreover, remittances provide a credit on a country's balance of payments for the recipient country. The liquidity in the recipient country is also likely to increase as it provides downward pressure on interest rates which can be beneficial to local firms, therefore encouraging them to establish new businesses.

However, remittances generate some negative effects including the possibility that poorer countries can become over-reliant on remittances and experience moral hazard. Furthermore, it is often argued that remittances can lead to an appreciation of local currencies, which can therefore, result to a loss of effective competitiveness in global markets.

The study of Ahmad et. al. (2008) macroeconomic determinants of international migration from Pakistan unveiled that the increase in the volume of remittances due to favourable economic conditions in the host countries provided fuel for people to engage with migration. The promising economic conditions in the host countries boost the remittance which push other people to move abroad. Meanwhile, Sultana & Fatima (2017) study analyzed the time series data from the period of 2000 to 2012 to investigate the push and pull factors of female migration in Bangladesh and found out that an increase in the amount of remittance serves as a catalyst for other females to emigrate. Ombaire (2016) study also found out that a rise in remittances resulted to increased migration from Kenya thus, having a positive relationship to emigration.

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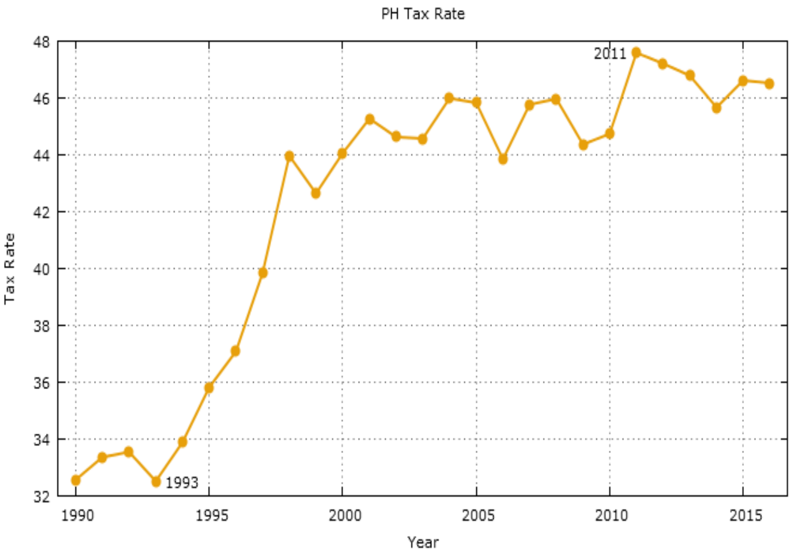
Figure 2.e. Line Chart of Philippine Tax Rate from the period of 1990-2016



The line graph reveals information concerning the tax rate - income, profits and capital gains (% of total taxes) in the Philippines from the period of 1990 to 2016. The graph shows that in overall, Philippines had an upward trend with a highest point in 2011 and lowest in 1993.

It can be seen from the graph that the lowest point is seen in the year 1993 with a value of 32.4955. On the contrary, the highest point is found in the period of 2011 with 47.5813% tax.

The current Philippine tax system has some of the highest income tax rates in the ASEAN region. The Philippine corporate income tax is the highest at 30% compared to the major ASEAN counterparts, considered a rate that "turns off" foreign investors who prefer to do business in countries imposing low taxes. Looking at the brighter side, the maximum personal income tax rate of 32% (the income earned in the country is taxed progressively) is not the highest compare to the Thailand and Vietnam that is 35% (Punongbayan, 2017).

Taxation imposes various effects on the economy that can be favorable and unfavorable. When tax rates on wages and salaries are reduced, people are encourage to work more. If tax rates on the returns to assets such as interests, dividends, and capital gains are lowered, people are encourage to save. Also, companies will likely invest domestically rather than abroad if the tax rates on business income are reduce.

However, tax reductions also create negative supply effects. People may choose to work less and take more leisure as tax cut increases the workers' disposable income. This "income effect" pushes against the "substitution effect," in which lower tax rates increase the financial reward of working. Moreover, tax provisions can also distort how investment capital is utilized. For example, a tax system favors housing over other types of investment. This will likely induce over-investment in housing and will reduce economic output and social welfare.

According to (Thompson, 2011), the prospect of people moving from the state is inevitably raised when generating new revenues for public services is suggested. However, evidence suggests that the taxes account for little of the migration . Conversely, according to Ciarniene & Kumpikaite (2011), lower tax rate in the destination country serves as a demand pull factor of migration.

Figure 2.f. Line Chart of Philippine Unemployment Rate from the period of 1990-2016

The line graph exhibits information about the unemployment rate in the Philippines from the period of 1990 to 2016. The graph reveals that in overall, Philippines experienced a downward trend with a highest point in 2004 and lowest in 2016.

The graph above depicts that the highest point is found in the period of 2004 with a value of 11.8% unemployment rate. On the contrary, the lowest point is located in the year 2016 accounting to 5.5% unemployment rate.

The unemployment trend of Philippines generally mirrors its pattern of economic growth. During periods of crises, it increases while it decreases when the country's output is accelerating, (Rubio, 2004). From 1990 t0 2004, Philippine unemployment rate is trended upward and from 2005 to 2016, the country experienced a declining trend.

The country's unemployment rate began to increase in 1991 due to the mild recession but declined at around 9% in 1992 to 1997. In 1998, unemployment rate went up again due to the following the 1997-1998 Asian financial crisis. Furthermore, the country’s labor force from 1990 to 1999 grew by an average of 2.9%, generally reflecting the country’s population growth rate but as the generated jobs have not kept up with the increase in the labor force, more and more people became unemployed every year.

Looking back at the graph, the unemployment rate in 2004 accounting to 11.8% unemployment is brought about by 1.9 million new entrants who joined the labor force - including the seasonal influx of new graduates and vacationing students seeking work - that exceeded the 3.6 percent or 1.1 million employment. This was also due partly to the slump in employment in the agriculture sector and the rise in underemployment rate (Urrutia, 2017).

It is then followed by decrease in 2005 due to the increase in the employment rate in all sectors of the country. Also, the sharp decline of unemployment rate in 2006 is due to the rise of generated jobs mainly from the services sector (PSA, 2006).

In 2016, according to the National Economic and Development Authority (NEDA), more jobs were generated in the beginning of the year reflecting the continued dynamism of the economy. The labor market was boosted by better employment opportunities in the industry and services sectors. Specifically, the industry sector generated 508,000 additional jobs and services sectors generated 1.18 million in January 2016. With employment growing faster at 2.0 percent relative to the labor force growth of 1.1 percent, the number of unemployed went down by 279,000 to 2.4 million during the period. The slight decline in labor force participation rate was partly due to the decision among the youth to opt out of the labor force in order to attend school and become full-time students is also the cause why unemployment rate declined. With the favorable labor market situation and the continued slowdown in the national unemployment rate, the Philippine Development Plan target of 6.5 - 6.7 percent for unemployment rate in 2016 was achieved and in fact, lower by 1.2%.

Unemployment is one of the major macroeconomic issues that an economy is facing. It poses adverse effects to the personal well-being of a person, to the society, and to the economy as a whole. Looking at the personal level, unemployment negatively affects the financial capacity, health, and mortality of an individual as well as his/her family. The major effect would be a fall in their living standards. The longer a person remains unemployed, the less training and development he/she is receiving and the more unemployable he/she becomes. For businesses, unemployment means lower demand for their products which results to lesser profit and lesser funds to invest. Crime such as robbery or burglary tends to increase. People who are unemployed, in desperate to finance their living, are most likely to commit such crime. When unemployment exists, the economy will be working below full potential and tax revenues will be lower. Furthermore, because of unemployment, more government benefits have to be paid and that involves a further economic opportunity cost.

According to Asis (2017), one of the reasons why Filipinos are moving abroad is due to persistent unemployment. This is supported by the push and pull theory of migration of Datta (1998) states that a high unemployment rate in the country of origin compelled people to go abroad. Ahmad et. al. (2008) and Ahad (2015) studies support the theory as they have revealed that the international migration from Pakistan was positively related and was highly significant with the unemployment rate implying that migrants tend to move abroad in case of high unemployment rate in their home country. The study of Kumpikaitea & Zickute (2013) specifically concluded that in order to decrease emigration rate in Lithuania, unemployment rate should go down at least to 8.5 percent. Ciarniene & Kumpikaite (2011) also stated that one of the supply-push factors in the origin area is lack of employment opportunities.

PART III. Regression Results

Table 1. Ordinary Least Square (OLS) results on the relationship of Emigration with Independent Variables in Philippines

Variable	Std. Error	t-ratio	p-value	Beta (Standardized)
C	22942.4	6.9521	<0.00001	
ER	316.772	3.3184	0.00343***	0.746037
GDPpc	**omitted**	**omitted**	**omitted**	**omitted**
INF	**omitted**	**omitted**	**omitted**	**omitted**
REM	1.66612	2.6381	0.01577**	2.861996
TR	668.034	-4.2036	0.00044***	-0.9984755
UR	1605.63	-1.8857	0.07395*	-0.3792618
Dependent Variable				Emigrants
No. of Observations				27
R-squared				0.878477
Adjusted R-squared				0.842020
Constant Term				159497

Note:
*Indicates that the coefficient was significantly different from zero at 0.10 percent probability level.
**Indicates that the coefficient was significantly different from zero at 0.05 percent probability level.
***Indicates that the coefficient was significantly different from zero at 0.01 percent probability level.
[1] GDP per capita was omitted due to multicollinearity.
[2] Inflation rate was omitted due to non-significance.

Table 1 shows that exchange rate, migrants' remittance inflow, tax rate, and unemployment rate were proven to have a significant linear relationship with the dependent variable having a p-value of 0.00343, 0.01577, 0.00044, and 0.07395 respectively with 0.10 level of significance. Since the p-values are less than the level of significance, the null hypothesis was rejected concluding that the four (4) variables are significant factors of emigration in Philippines. This reveals that any changes in each of this four variables significantly affect the emigration in the country.

On the other hand, among the independent variables, only inflation rate revealed to have no significant relationship with emigration having a p-value of 0.62265 which is greater than the level of significance of 0.10 accepting the null hypothesis (there is no significant relationship between the emigration and inflation rate). This indicates that inflation rate does not influence the emigration decisions of Filipinos. It is due to the fact that cost of living in the foreign countries where Filipinos are mostly emigrating such as USA and Canada (CFO, 2015) is higher than the Philippines. So, whether there is a high or low inflation rate in the country, the emigration decision of Filipinos is not significantly affected. This result opposes Ahmad, et. al., (2008), Ahad (2015), and Ombaire (2016) as these researchers unveiled that inflation rate is a significant push factor of migration. Moreover, these researchers concluded that an increase in inflation rate compels a person to move abroad.

The standardized coefficient was used in this study as the independent variables are expressed in different units. Furthermore, as this study intended to determine the impact of independent variables on the dependent variable, it is a must to interpret the absolute value of standardized coefficient. If we need to rank these independent variables to the dependent variable based on the unstandardized coefficient, it would not be fair ascertainment as the unit of these variables are not same.

The standardized coefficient of the exchange rate is 0.746037 which indicates that a change of one standard deviation in the exchange rate ceteris paribus, results in a 0.746037 standard deviations increase in the emigration. The standardized coefficient of the migrants' remittance inflow is 2.861996 which exhibits that a change of one standard deviation in the migrants' remittance inflow ceteris paribus, results in a 2.861996 standard deviations increase in the emigration. The magnitude of the parameter is the highest among the others showing a greatest impact on emigration. The standardized coefficient of the tax rate is -0.9984755 which means that a change of one standard deviation in the tax rate ceteris paribus, results in a 0.9984755 standard deviations decrease in the emigration. Unemployment rate's standardized coefficient is -0.3792618 which reveals that a change of one standard deviation in the unemployment rate ceteris paribus, results in a 0.3792618 standard deviations decrease in the emigration. Inflation rate's standardized coefficient is 0.057913 which reveals that a change of one standard deviation in the inflation rate ceteris paribus, results in a 0.057913 standard deviations increase in the emigration. The magnitude of the parameter is very low (almost zero) which facilitated its non-significance with the of emigration in the Philippines.

As shown in the Table 1, the value of r-squared in the emigration regression equation is 0.878477 while the value of adjusted r-squared is 0.842020. The latter was used to judge goodness of model as the researchers are building linear regression on multiple variables. Moreover, the adjusted r-squared tells the percentage of variation explained by only the independent variables that actually affect the dependent variable. Therefore, 84.20% of the variation of the emigration is explained by the independent variables. This implies that the independent variables are good measures and determinants of emigration in the Philippines.

Using the results from Table 1, the generated regression equation of this study is:

$$\mathbf{E = 159497 + 0.746037\,\mathit{ER} + 2.861996\,\mathit{REM} - 0.9984755\,\mathit{TR} - 0.3792618\,\mathit{UR}}$$

GDP per capita and inflation rate were omitted from the formulated regression equation as the former causes multicollinearity among all the independent variables while the latter was statistically not significant with the dependent variable. In the model selection, GDP per capita and inflation rate were included as there is an established relationship between these two variables and emigration but due to the reasons stated, it was necessary to exclude these variables from the regression model.

Various researchers who conducted studies regarding factors of emigration including Sulaimanova & Bostan (2014), Ombaire (2016), and Sultana & Fatima (2017) unveiled that GDP per capita is a significant factor of emigration. Specifically, Sulaimanova & Bostan (2014) and Sultana & Fatima (2017) revealed that a low level of per capita GDP in the country of origin encourages emigration implying that GDP per capita affects migration negatively; the lower real GDP per capita results to higher emigration rate. Whereas, Ombaire (2016) found out that improved GDP per capita leads to increase in emigration. However, in the Philippine setting, GDP per capita was statistically proven as the cause of multicollinearity among all the independent variables.

Significant Factors of Emigration in the Philippines

The Ordinary Least Square (OLS) result unveiled that:

The exchange rate is positively related with the emigration in the country and is statistically significant at 0.10 percent probability level. This implies that the depreciation of Philippine currency against host/destination country facilitates the increase in the number of Filipino emigrants. When the money earned abroad is being remitted in the country, Filipinos become wealthier which induces the emigration decision of Filipinos. The findings of Sulaimanova & Bostan (2014) and Ullah (2012) are comparable to this study. Specifically, these researchers unveiled that the depreciation of local currencies serves as a pushing factor to emigrate. A contrary finding is noticed to Ombaire's (2016) study where bilateral exchange rate has a negative significant effect to emigration from Kenya implying that depreciation in bilateral exchange rate results to a decline in emigration. Ombaire further explained that when there is a depreciation of source country’s currency, the emigrant’s monetary outlay rises because of increase in contract fee for jobs, transportation costs, as well as agency fees. Due to such high costs, a rising exchange rate of currency will negatively impact a person's decision to emigrate.

Emigration is also revealed as positively related with the migrants' remittance inflow in the country and is statistically significant at 0.10 percent probability level. This indicates that an increase in migrants' remittance inflow in the Philippines serves as a catalyst in the rise in the number of Filipino emigrants. This phenomenon is called chain migration process. When the remittances received from abroad increase, other Filipinos are persuade to move out from the country due to perceived better favorable economic conditions in the foreign countries. This is comparable to the findings of Ahmad et. al. (2008), Sultana & Fatima (2017), and Ombaire (2016) in which remittances and emigration are positively related.

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The emigration is negatively related with the tax rate in the country and is statistically significant at 0.10 percent probability level. This means that an increase in the tax rate in the Philippines results to a decrease in the number of Filipino emigrants. Thompson (2011) elaborated that there are many reasons households remain to a country though taxes are increased, including the fact that they value the public services financed by taxes, the potential gains from migrating are often small, and the cost of relocating to a new country (both financially and psychologically) is quite high. Thompson concluded that higher income taxes are shown to decrease the numbers of people leaving a state. If the government uses the generated revenues from higher taxes in creating jobs, reducing unemployment, and reducing property crime, the small negative impacts from taxes can be easily overcome. This finding is different from Kumpikaitea & Zickute (2013) study in which they precisely found out that to decrease the migration rate from Lithuania, taxes specifically value added tax (VAT) should be reduced, thus having a positive relationship. Decreasing the amount of tax would help people to survive and increase their spending power.

Emigration is also found out to be negatively related with the unemployment rate in the country and is statistically significant at 0.10 percent probability level. This implies that an increase in the unemployment rate in the Philippines disheartens Filipinos to go abroad. The reason why Filipinos are dishearten to go abroad given the high unemployment rate in the country is because they are lured by close family ties, sense of belongingness, and for majority, a feeling that they are needed to help fix the issues and problems in the Philippines (McGeown, 2011). Moreover, according to Asch (1994), these are called psychic costs, a term used by economists to describe costs that are not monetary but prevent migration to happen, such as separation from family. This finding opposes what Asis (2017) stated that one of the reasons why Filipinos are moving abroad is due to persistent unemployment. Furthermore, the push and pull theory of migration by Datta (1998) which states that a high unemployment rate in the country of origin compels people to go abroad contradicts the finding. Ahmad et. al. (2008), Ahad (2015), Kumpikaitea & Zickute (2013), and Ciarniene & Kumpikaite (2011) studies support the theory as they had revealed that unemployment is positively related to emigration.

Conclusion and Recommendation

From the foregoing findings of the study, the following conclusions were drawn:

1. For the past 27 years, the number of Filipino emigrants was revealed having an elevating trend.
2. Within the span of 27 years, the six independent variables showed fluctuating trends, either upward or downward. Specifically, exchange rate, GDP per capita, migrants' remittance inflow, and tax rate have upward trend while inflation rate and unemployment rate have downward trend.
3. The OLS result unveiled the following:

3.1. The exchange rate is positively related with emigration and is statistically significant factor. The depreciation of Philippine currency against host/destination country facilitates the increase in the number of Filipino emigrants. When the money earned abroad is being remitted in the country, Filipinos become wealthier which induces the emigration decisions of Filipinos.

3.2. The size of migrants' remittance inflow received in the country also affects emigration positively and is statistically significant factor. This implies that an increase in the migrants' remittance inflow encourages Filipinos to move in to another country. The better economic conditions abroad boost the remittance inflow which facilitate why Filipinos move abroad.

3.3. The tax rate in the country negatively affects emigration and is statistically significant factor. This means that an increase in the tax rate in the Philippines results to a decrease in the number of Filipino emigrants. The generated revenues from higher taxes imposed to the citizens, when used in creating jobs, reducing unemployment, and providing better public goods and services, facilitate the reduction of Filipinos leaving the country.

3.4. The unemployment rate is also negatively related with emigration in the country and is statistically significant factor. This exhibits that an increase in the unemployment rate in the Philippines disheartens Filipinos to go abroad. The reason why they are dishearten to move in to foreign land given the high unemployment rate in the country is because they are lured by close family ties, sense of belongingness, and a feeling that they are needed to help fix the issues and problems in the country.

3.5. Among the six independent variables, only inflation rate was proved as not statistically significant factor of emigration in the Philippines. This is due to the fact that cost of living in the foreign countries where Filipinos are mostly emigrating such as USA and Canada is higher than the Philippines. Therefore, whether there is a high or low inflation rate in the country, the emigration decision of Filipinos is not significantly affected.

3.6. The data of GDP per capita was statistically proven as the cause of multicollinearity among all the independent variables. Various researchers who conducted studies regarding factors of emigration including Sulaimanova & Bostan (2014), Ombaire (2016), and Sultana & Fatima (2017) unveiled that GDP per capita is a significant factor of emigration. Therefore, it was necessary to exclude the said variable from the regression model.

4. In the Philippine setting, a high exchange rate (PHP/US$) and a rise in migrants' remittance inflow serve as push factors of emigration.

5. An increase in tax rate and a rise in unemployment rate regard as pull factors of emigration in the country .

On the basis of the above findings and conclusions, the following recommendations were made:

1. An investment guidance such as investment in the shape of remittance should be provided to Filipino emigrants to encourage them to establish local business in various economic sectors, particularly the productive ones. In result, this will encourage growth in the micro level as well as in the economy as a whole.

2. Migration policies concerning the protection of Filipino emigrants abroad should be further strengthened.

3. Studies considering other factors affecting emigration in the Philippines should be conducted.

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