Journal of Economics, Finance and Accounting Studies
ISSN: 2709-0809
DOI: 10.32996/jefas
Journal Homepage: www.al-kindipublisher.com/index.php/jefas

JEFAS
AL-KINDI CENTER FOR RESEARCH AND DEVELOPMENT

| RESEARCH ARTICLE

The Paradox of Inequality: Factors Influencing Income Inequality in the Philippine Setting

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| ABSTRACT
In the Philippines, income inequality is one of the country's most serious issues. This study aims to look at some of the factors that influence income inequality in the Philippines; Educational spending, GDP per Capita, and tax revenue. These are the Philippine elements that have a significant impact on this study; On how citizens pay their taxes, the state of the country's GDP, and its educational priorities. The importance of these elements will be discussed in this study to eliminate income inequality in the Philippines and for every Filipino citizen to develop in their lives. Secondary data will be used ranging from 2000-2019. The results show that all independent variables are significant to each other, with an R-squared of 0.988. The results also show that GDP had the most significant relationship with Income inequality compared with the other variables.

| KEYWORDS
Income Inequality, Educational Expenditure, Tax Revenue, GDP per capita

| ARTICLE DOI: 10.32996/jefas.2022.4.1.42

1. Introduction

1.1 The problem and its background

"In the Philippines, income inequality is one of the country's most serious issues. Most low-paying people will continue to have low-paying jobs, while those who have a good job will continue to get richer. This is one of the primary reasons why people are unable to make progress in their lives. This study aims to look at some of the factors that influence income inequality in the Philippines. Educational spending, GDP per Capita, and tax revenue are the three factors. These are the criteria that will help us assess whether or not this will assist reduce income inequality in the Philippines and other countries."

"These are the Philippine elements that have a significant impact on this study. On how citizens pay their taxes, the state of the country's GDP, and its educational priorities. The importance of these elements will be discussed in this study to eliminate income inequality in the Philippines and for every Filipino citizen to develop in their lives."

"Many other forms of inequality, such as income, political power, and social position, impact and are affected by it. When there's an inequality of income between a community, it could lead to a wider gap between the social and upper class because income became a basis of social standard."

"The purpose of this paper is to identify the economic factors of income inequality and the effect on Philippine economic growth to come up with policies that will give solutions to problems concerning long-run economic growth and income inequality."

As defined by the World Bank, income inequality is the severe concentration of income in the hands of a relatively small percentage of the population. It is frequently described as the difference between the richest and the rest of society. In addition to this, it can refer to either the distribution of income or the distribution of wealth. According to research conducted by the World Institute for

Development Economics at the United Nations University, the wealthiest one percent of individuals possessed 40 percent of all worldwide assets in the year 2000 alone. According to research issued by Credit Suisse (2015), global inequality is continuing to climb. Half of the world's wealth is now in the hands of people who belong to the top percentile of the income distribution, with assets totaling more than $759,000.

Brueckner and Lederman (2018) did a study that determined the association between GDP per Capita and income inequality in the United States. A broad range of empirical evidence supported the idea that income inequality is favorable for transitional growth in impoverished countries but bad for high-income countries. Seefeldt (2018) evaluated the relationship between education expenditure and income inequality in the United States of America using panel data spanning 1987 to 2015, and the results were compelling. The study results, which used Ordinary Least Squares (OLS) regression techniques with state and period fixed effects, revealed that educational investment reduced income inequality as evaluated by the Theil index. Apart from that, the studies indicate that there are nine in this study. The link between educational expenditure and income disparity was statistically inverse, suggesting that education at all levels will be critical in combating economic inequality. The relationship between income inequality and municipal and school district finances in the United States of America from 1970 to 2000 was investigated by Boustan et al. (2010) in the context of municipalities and school districts. According to their research findings, greater income inequality is connected with more significant increases in tax revenues and a faster rise in public expenditures at the municipal and school district levels.

The topic of income disparity will be discussed in this article. Also included will be a discussion of the factors that influence income disparity in the context of the Philippines. In particular, the relationship between GDP per Capita, education expenditure, tax revenue, and income disparity is being investigated. An examination of the link between income disparity and the gross domestic product (GDP), education expenditure, tax revenue, and the size of these components is essential because it provides insight into what the government can do to reduce income inequality.

1.2 Objectives of the Study

The relationship between growth and inequality has remained a source of debate for economists, and over the years, a variety of main ideas have developed. Inequality of income distribution is one of the most important factors influencing a country's economic success. According to some estimates, despite the country's excellent financial performance, it is nevertheless considered to have a moderate and fluctuating growth rate. Having said so, the researchers aim to:

1. Determine the current situation of economic variables (educational expenditure, tax revenue, and GDP per Capita) and income inequality in the Philippines.
2. See if there is a significant relationship between Income inequality in the Philippines and the variables (educational expenditure, tax revenue, and GDP per Capita) affecting it.
3. Make suggestions to improve the country's situation and economic performance. That the government can utilize when performing research on the impact of economic inequality in the country.

1.3 Statement of the Problem

During the past few decades, income inequality has emerged as a significant issue in the Philippines. Because it forms the backbone of the Philippine economy, it is a vital contributor to its economic development. As a result, the purpose of this study is to examine the relationship between income inequality in the Philippines and factors such as GDP per Capita, educational expenditure, and tax revenue. By this, the researcher seeks to provide answers to the following questions:

1. What is the current situation of economic variables and income inequality in the Philippines?
2. Is there a significant relationship between Income inequality in the Philippines and the variables affecting it?

1.4 Formulation of Hypothesis

H_0: There is no statistically significant association between income inequality and the things that influence it.
H_1: There is a statistically significant association between income inequality and the things that contribute to it.

1.5 Significance of the Study

The study's findings will be able to provide an overview of the relationship between GDP per Capita, educational expenditure, and tax revenue in the Philippines and income inequalities. This will be extremely important in the following situations:

Department of Labor and Employment (DOLE). To assist in improving workers' conditions by utilizing the results and recommendations of research into the effect of income disparity.

Department of Education. Providing more excellent knowledge regarding the factors that influence income and income disparity in the Philippines is the goal of the Department of Education.

The Bureau of Internal Revenue (BIR). One of the objectives of this study is to help the Philippine government trade policymakers improve the accommodation of private industry and service sector needs and empower consumers to promote economic growth. Since this study would evaluate the relation and the degree of influence of household income to economic growth, the study's findings can be used by the BIR in identifying significant indicators that are needed to be prioritized or monitored in the county's taxes. The results of this study can also be used in creating innovative or efficient ways to remedy the country's current economic-related issues.

Private Industries. However, this paper will explore in detail the impact of household income on domestic firms or trends relating specifically to the firms' productivity. Private industry could still use the study's findings to evaluate the economic trends relating to their income and consumption, especially to those firms that are engaging in employment. This study also aims to draw the attention of private industries in coordinating with the Philippine government in increasing economic opportunities in the overall employment sector.

Household Sectors. Although the empirical analysis of the relation of income inequality and economic growth is primarily in the national perspective, the findings of this study could still be beneficial to the household perspective. Furthermore, it will make them conscious about how the government performed throughout the given decades and will operate in the future.

Future Researchers. This study could benefit future researchers as the ideas presented may be used as reference data in conducting new research or testing the validity of other related findings. It could also serve as a related study for their research. Future will be able to come up with effective and efficient solutions to the country's recent problems with income inequality, commodity provision, and accessibility.

1.6 Scope and Limitations of the Study

The subject of the study is Income Inequality in the Philippine economy. During the past few decades, it has emerged as a fundamental issue in the Philippines. Its objectives are to identify the factors that contribute to income inequality and to assess the link between the variables of educational expenditure, tax revenue, and GDP per Capita. The study would utilize time series data that would cover the period 2000 **to** 2019, a total of 20 observations. The researchers would use secondary resources (open stat websites such as Philippine Statistics Authority, World Bank, and Department of Budget and Management Database) in an empirical analysis of the data; this is due to limited access in collecting primary data, as well as financial and time constraints. The researchers would only gather annual data and would disregard other periodicals since some of the indicators used in this study have only annual updates available in the 20 years (2000-2019).

2. Review of Related Studies

In economics, income inequality is a substantial discrepancy in income distribution across people, groups, communities, social classes, or nations. Inequality in income is a significant aspect of social stratification and social class. Many other types of inequality, such as money, political power, and social position, influence and are affected. Income is a crucial driver of quality of life, impacting the health and well-being of people and families, and it varies according to social characteristics, including gender, age, and race or ethnicity.

2.1 Income Inequality and Educational Expenditure

The relationship between education and income inequality has remained a complex question that has frequently been at the heart of economic disputes. Shahabadi, Nemati & Hosseinidoust (2018) undertook a study to examine the impact of income inequality in a sample of Islamic nations between 1990 and 2013. Their study revealed that the enrolment rate in primary and secondary schools has a statistically significant negative effect on income inequality. The enrolment rate in universities has a statistically significant positive impact on income inequality. According to researchers, education increases the productivity of low-income people because it improves their position in the labor market. Because of the increasing expertise and remuneration of those who receive a university degree, the gap between different social classes widens due to their education. Suppose governments sponsored higher education in the same way that primary and secondary schools are in most countries. In that case, this could pave the way for the alleviation of poverty and inequality of income.

The impacts of higher education on the evolution of inequality were investigated by Prettner and Schaefer (2020) using an overlapping generations model with three social classes. At first, no social class makes a financial investment in higher education, and inequality is fueled by wealth accumulation or bequests from benefactors. Once the wealthy reach a particular income level, they begin to invest in higher education, resulting in their children's payments growing quicker. After some time has passed, the

middle class and, potentially, the impoverished will follow suit. As a whole, this approach offers a possible explanation for I the U-shaped growth of income inequality, (ii) the decline and rise of inheritance flows, and (iii) uneven investments in higher education.

A quadratic association between education and income inequality is established in this study by Arshed, Anwar, Hassan, and Bukhari (2019) for the period 1960 to 2015 in Asian developing economies. For estimating long-run coefficients, panel cointegration and fully modified OLS are used in conjunction with each other. As a result, starting, primary, secondary, and postsecondary enrollment all result in increased inequality, according to the findings. However, after a certain threshold level of education has been reached, the effect of education on income inequality turns negative (i.e., 97.5 percent for primary, 43.5 percent for secondary, and 11 percent for tertiary). As a result, this finding demonstrates the Kuznets phenomenon of an inverted U-shape relationship for enrollments in primary, secondary, and postsecondary education.

This research conducted by Qazi, Raza, Jawaid & Karim (2018) studied the impact of progress in Pakistan's higher education sector on income inequality, utilizing yearly time series data from 1973 to 2012. The researchers used annual time series data to conduct their research. The cointegration approach using autoregressive distributed lag bound testing reveals a long-run link between higher education and income inequality in the United States. In the long run, higher education has a negative and statistically significant association with income disparity, whereas, in the short run, higher education has a negative but statistically insignificant relationship with income inequality. It is suggested by the findings of this study that development in the higher education sector would be an essential policy option for controlling income disparity in Pakistan and that it should be examined as a means of improving the country's income distribution.

New findings from a study conducted by Coady andDizioli (2018) are presented and in which examine the relationship between income inequality and education expansion — that is, raising the average number of years of schooling while decreasing the disparity of education. When dynamic panel estimation techniques are used to address issues of persistence and endogeneity, the researchers discovered a large, positive, statistically significant, and stable relationship between inequality of schooling and income inequality, particularly in emerging and developing economies and among older-age cohorts, particularly in emerging and developing economies. The link between income disparity and the average number of years spent in school is positive, consistent with the constant or increasing returns to additional years of education. While this favorable association is minor and not necessarily statistically significant, the researchers discovered a statistically significant negative relationship between younger cohorts' years of schooling and overall life expectancy. According to the researchers, statistics have shown that their dynamic estimators are consistent and that our identifying instruments are valid. According to policy simulations, education expansion will continue to be a means of decreasing inequality. Even though this role will reduce as countries progress, it can be strengthened with a greater emphasis on eliminating inequality in educational quality.

On behalf of the European Commission, Jianu (2018) undertook a study that provides an overview of existing inequalities and their drivers in the member states of the European Union and their developments throughout the 2002-2008 and 2009-2015 sub-periods. Additionally, the study examines the relationship between government spending on health and education and economic inequality in the European Union from 2002-2015. Based on his findings, the inverse relationship between these two functions of budget expenditures and income disparity has been established. He thinks that it is beneficial for member states of the European Union to analyze the impact of budgetary measures on income distribution in yearly budget proposals to avoid the accumulation of gaps in income distribution. In the absence of such action, there is a risk that the absolute degree of income disparity will continue to rise in the future.

According to Arshed, Anwar, Kousar & Bukhari (2017), their research assumes that educational attainment is associated with wealth disparity in a quadratic fashion. This study uses panel data from 1990 to 2015 to analyze it in the context of the South Asian Association for Regional Cooperation (SAARC) countries. Because of the large amount of long-run panel data, it was necessary to employ a panel cointegration strategy, which was then followed by applying a wholly modified OLS model to obtain long-run coefficients. Initially, elementary and secondary enrolment raise inequality, whereas tertiary enrollment decreases disparity, as demonstrated by the findings. However, they have a reverse effect after a particular threshold level of enrolment is reached (76 percent for primary, 42 percent for secondary, and 7 percent for tertiary).

Consequently, it creates an inverted U shape for elementary and secondary enrolment and an inverted U shape for tertiary enrollment. As a result, there is a diminishing marginal return impact on schooling. Only the economies of India, Sri Lanka, the Maldives, and Nepal, which are members of the South Asian Association for Regional Cooperation (SAARC), have high enough schooling enrollments to influence income disparity negatively.

The rise in income inequality has occurred despite India's strong development performance and progress in eradicating extreme poverty. According to this study written by the International Monetary Fund, Asia and Pacific Department (2017), educational

inequality and the significant skill premium resulting from this education inequality contribute to income inequality. It uses comprehensive household survey data to document crucial areas of the Indian economy and educational system, otherwise challenging to prove. An economic model is being constructed to simulate proposed policies' direct and indirect consequences on inequality, educational decisions, and output. This model is based on the findings of the research. Although targeted transfers effectively reduce economic inequality, rising returns to education have the most significant influence on measures of educational achievement, according to the study.

Curtis's (2021) research article sheds light on the relationship between educational attainment and economic disparity in the United States of America. The Human Development Data Center provides them with all of their data, which is up to date. The Gini Coefficient, a well-known statistic for measuring income disparity in a country, was used to determine income inequality in a particular country. By considering the average number of years of schooling completed in each country and the Gini coefficient for each country, a simple linear regression model was examined. After evaluating numerous research that has been ascribed to this relationship, it became clear that several additional elements contribute to this link. Multiple regression models were created using secondary variables such as government expenditure and the population's median age. Understanding this relationship will aid governments in their efforts to reduce wealth disparity.

Income inequality, particularly that resulting from a society's widespread unequal distribution of opportunities, is undesirable from the standpoint of social justice. Furthermore, unequal income distribution can be detrimental to the achievement of long-term economic growth. Expanding educational opportunities is a key factor in reducing educational inequality and, consequently, income inequality. The study by Lee and Lee (2018) looks at how human capital, as measured by educational attainment, is related to income distribution. The regressions, which were conducted using a panel data set spanning a broad range of countries between 1980 and 2015, demonstrate that a more equitable distribution of education contributes significantly to the reduction of income inequality. Inequality in income can be reduced through public policies that improve social benefits and price stability, while inequality in educational opportunities can be reduced through public expenditure on education. Higher per capita income, greater openness to international trade, and faster technological progress, on the other hand, have the tendency to make both income and education distribution more unequal as a result. The researchers discovered that they could attribute the rising income inequality within East Asian economies in recent decades to the equalizing effects of rapid income growth, rapid progress in globalization, and rapid technological change, which have outweighed the income- equalizing effects of improved equality in the distribution of educational attainment during the period.

Investing in human capital, particularly higher education, according to Canlas (2016), is one instrument that serves the twin goals of boosting economic growth while providing broad-based rewards or inclusive growth. As a result of the low proportion of enrollees and graduates in higher and scientific education in the Philippines, the country needs to increase its stock of labor with higher and scientific education to meet the growing demand for skilled workers and close the growing gap in lifetime earnings between college and high school graduates. The researcher also mentioned that, in this environment, where the demand for skilled labor, the returns on higher education, the wage gap between college and high school graduates, and the cost of college tuition are all increasing, government policymakers would be wise to establish a well-designed national education loan program to assist students in completing their higher education.

Suhendra et al. (2020) investigated how human capital and other economic variables, such as private investment, economic growth, government investment, inflation, and unemployment, affect inequality in Indonesia's provinces by looking at private investment, economic growth, inflation, and unemployment. The education index approach was used by the researchers in the development of a new index for human capital. In addition, they used a panel data model with fixed effect estimation to analyze data from 34 provinces from 2013 to 2019. Among the findings is that human capital has a negative and statistically significant impact on income inequality. It is believed that an increase in human capital is associated with an increase in knowledge and competence as a result of the longer average school year and expectations of the school year. Individuals' chances of being hired and earning a higher wage have increased as a result of the development of human capital, which has helped to reduce inequality in earnings. They also discovered that inflation contributes to a widening of the income distribution gap.

A mere suggestive phrase in economics before 1958, "human capital" played no role in discussions of educational policy, and it continues to play no role in discussions today. As stated in the paper written by Holden and Biddle (2016), there was an active theoretical and empirical human capital research program in economics within five years of establishing a formal program. This paper also discusses two factors that contributed to the idea of human capital becoming so influential in educational policy so quickly. First and foremost, the human capital concept implied that policies promoting education could help achieve goals – first faster economic growth, then poverty reduction – that were pushed to the top of the national policy agenda during the period of human capital theory's initial development because of a variety of circumstances. Secondly, an advocate of the theory who was able to convincingly explain the logic of the theory as well as the emerging empirical evidence linking education to those goals

was elevated to a position of power and influence. As a result of these events, researchers believe that a profound transformation in the public discourse surrounding education policy in the United States has begun and that this episode was a contributing factor to that transformation.

2.2 Income Inequality and Tax Revenue

Iosifidi and Mylonidis (2017) used a panel data set of effective tax rates that were directly comparable across countries in the Organization for Economic Co-operation and Development (OECD) and overtime to examine the redistributive effects of labor, consumption, and capital tax rates over time. From a redistributive standpoint, they demonstrated that the tax mix is more important than the tax rates taken in isolation from the rest of the tax system. According to the findings, increasing the tax burden on labor or consumption compared to capital leads to greater income inequality between individuals. On the other hand, increasing the reliance on labor taxes in contrast to consumption taxes helps to enhance income equality. This effect is most likely due to the redistributive objectives of social security contributions, which are incorporated into labor taxes in the first place.

Over the past few decades, the rich and the poor gap has grown in almost every OECD country. Caminada, Wang, Goudswaard & Wang (2017) undertook a study to determine whether and to what extent taxes and social transfers have contributed to this upward trend in the labor market. Has the ability of different social programs to redistribute resources evolved? Several aspects of fiscal redistribution in a comparative environment for the period 1967-2014 are disentangled in this work, which contributes to the literature. They examined household primary income inequality and disposable income inequality, redistribution via transfers and income taxes, and the underlying social programs driving the changes using microdata from the Luxembourg Income Study (LIS). Researchers also provided specific information on fiscal redistribution in 47 countries from 1967-2014, based on data derived from the International Labor Organization's Labor Statistics (LIS). The LIS data are sufficiently precise to estimate both the overall impacts of redistribution and the partial effects of redistribution caused by several different taxes or transfers. They contend that this empirical study does not demonstrate why benefits and taxes have become more or less redistributive. Considering the progressivity built into tax and benefit systems, it is reasonable to anticipate that the tax and benefit systems will automatically have a more considerable redistributive influence as primary income inequality increases. However, policy opportunities will almost definitely account for a portion of the changes in redistribution.

Researchers Balseven and Tugcu (2017) investigated how the fiscal policy affected income distribution in developed and emerging countries. They assessed the explanatory power of taxes and transfers on income inequality in 17 developing and 30 industrialized nations between 1990 and 2015. They did it by employing linear panel data estimation approaches. According to the conclusions of their study, tax revenues reduce economic inequalities in developing nations, but public assistance reduces income inequalities in rich countries.

The disparity between tax revenue and income This is how tax revenues continue to expand, and it impacts income disparity in Indonesia. It is a significant study that needs to be investigated further. It is believed by Suryanto, Purnamasari & Kurniawan (2018) that the magnitude of per capita income in Indonesia is in the medium category, with the number of impoverished people continuing to climb during the last ten years. The purpose of this study is to determine the relationship between income disparity and tax revenue in Indonesia. Typically, the data used is a panel of data that is combined with a cross-section of data and time series, with the data being collected between 2014 and 2016. After conducting double semi-log linear regression through Pooled Least Squares with Fixed Effects Model (FEM) analysis, the research concludes that tax revenues positively link income disparity and that restaurants will be assessed from an Islamic standpoint. Tax policy from an Islamic perspective provides valuable input for the implementation of tax policy in Indonesia. Using the tax system in Islam, the cost of the tax burden in society will be equal and not too burdensome if the charge is applied based on people's capacity rather than on their wealth. Indeed, it has the potential to contribute to the reduction of inequality and poverty in each region.

Obaretin, Akhor, and Oseghale (2017) conducted a study that focuses on how taxation can be used as an effective tool for income redistribution in Nigeria, intending to reduce poverty. For the time-series data, the researchers used data from the Office of the Federal Inland Revenue Service and World Bank data from the relevant years of 1981 to 2014, together with a statistical method called the Ordinary Least Squares (OLS). In Nigeria, the findings of their analysis revealed that taxation was unable to fulfill its role as a standard mechanism for wealth redistribution due to a lack of resources. On the other hand, the authors strongly advise that the Nigerian tax system must thoroughly evaluate the distributional implications of its policies to establish a more income-inclusive society by closing the income inequality gap between the wealthiest and the rest of the population.

Many advanced economies have recently begun to implement fiscal austerity measures. Because this has occurred when income gaps are significant and increasing, policymakers have expressed concern about the inequality impacts of budget consolidations. An empirical investigation of the effects of tax-based mergers on income inequality, output, and labor market conditions for a sample of 16 OECD nations during the period 1978–2012 was conducted in the study of Ciminelli, Ernst, Merola & Giuliodori (2019),

which sheds fresh light on this problem. It is discovered that tax-based income consolidations lower income disparity but at the expense of a decline in economic output. The composition of taxes, on the other hand, is essential. Indirect taxes have a more significant impact on income disparity than direct taxes, probably due to the existence of a positive labor supply channel in the economy. The price of the consumption basket rises due to higher indirect taxes, which in turn creates incentives for agents to expand their labor supply. This effect, according to the researchers, is more pronounced in middle-aged women. According to the research, specific mechanisms such as general consumption taxes and personal income taxes are the most effective at reducing inequality while also minimizing the trade-off between equity and efficiency.

The practical aspects of income inequality in China and other large emerging market countries were explored in this paper by Cevik & Correa-Caro (2019) over the period 1980–2013, emphasizing the redistributive contribution of fiscal policy to the distribution of income. They discovered evidence supporting the presence of a Kuznets curve – an inverted U-shaped link between income inequality and economic development – in China and the panel of BRIC + nations after employing instrumental variable techniques to deal with potential endogeneity. Concerning China, empirical findings suggest that government spending and taxation have opposing effects on income disparity. While government expenditure appears to be having a negative influence on income distribution, taxing seems to be having a positive impact. It indicates that fiscal policy in China has a more considerable redistributive effect than the BRIC + panel suggests. Still, it is not significant enough to offset the adverse impact of other influential factors.

Following the disintegration of the former Yugoslavia, Croatia, Serbia, and Slovenia pursued distinctly divergent paths in terms of income tax reform, which may account for the disparities in income inequality that exist now in these nations. In this study, Rakić and Vladisavljević (2021) examined the redistributive impacts of establishing progressive tax systems, such as those in Slovenia and Croatia, in the Serbian context and found that they had a positive effect. Their findings, based on microsimulation modeling and data from the 2017 Survey on Income and Living Conditions, imply that introducing both the Croatian and Slovenian tax systems would result in lower levels of income disparity and poverty if they were applied in Serbia as well. As a result of the higher tax burden on the highest incomes, the Slovenian system achieves a greater reduction in inequality while generating a significant rise in tax revenues. The Croatian tax system contributes to a more substantial decrease in poverty since a more generous personal allowance exempts a more substantial number of low-income individuals from paying labor taxes.

This study, undertaken by Franko (2021), investigated how state government responses to the economic crisis, shown in the form of unanticipated changes in state fiscal policy, affect income disparity in the state. Because practically every state must make difficult policy decisions relating to taxes and spending to resolve budget deficits, state governments are critical actors in times of fiscal stress. Both taxes and expenditure are policies that contribute to the income gap. For the study of state inequality, it is vital to concentrate on moments of fiscal stress because individuals with fewer resources are more likely than others to suffer the repercussions of their state's budgetary reaction during these periods. According to this study, income disparity increases when conditions respond to the economic crisis by depending on unanticipated spending cuts, employing time-series cross-sectional data to demonstrate its findings. These consequences are likely to last long after the initial economic collapse. In addition, many post-Great Recession surveys are used to examine one individual-level implication of the aggregate relationship between state policy responses and inequality: that people will be worse off financially when their states prioritize budget cuts in response to economic collapse. The findings have consequences for the future of inequality in the United States and the development of state budget reform policies in the future.

Despite a vast theoretical literature on the relationship between inequality and growth, no consensus has emerged, and empirical evidence is inconclusive, according to the Economics Department of the Organization for Economic Cooperation and Development OECD (2012). Nonetheless, specific structural reforms aimed at raising living standards have an impact on income distribution. Taxes and transfers, for example, affect not only the distribution of income but also GDP per capita by influencing labor use and productivity. Some tax reforms appear to be win-win scenarios, improving growth prospects while narrowing the income distribution. Others, on the other hand, may imply a trade-off between these goals.

According to International Monetary Fund IMF (2014), citizens who save and contribute are, for the most part, among the benefited, so even a relative assessment on capital income can build progressivity. Besides, burdening capital income is important to alleviate exchange in the tax collection from business, as it is normally troublesome or even difficult to recognize work from capital income procured by the proprietor overseers of a firm. The last option makes it vital to comprehensively fit the paces of the Personal Income Tax (PIT) and the consolidated weight of Corporate Income Tax (CIT) and profit/capital additions tax assessment. Nonetheless, capital personal assessments, if excessively high, can have high effectiveness costs on account of their distortionary consequences for reserve funds and speculation. Besides, it tends to be authoritatively hard to burden capital considering its portability, with the last option prompting sufficient avoidance and evasion of valuable open doors.

As per Hope and Limberg (2022), significant tax reductions for the rich push-up income inequality yet don't help financial execution. It hence gives solid proof against the powerful political-economic thought that tax breaks for the rich 'stream down' to help the more extensive economy. It implies that it stays confusing why 'stream down' thoughts have been so strong and steady in charge strategy making in the high-level popular governments, notwithstanding the absence of macroeconomic advantages from curtailing government expenditures on the rich. Additionally, it is expected to more thoroughly test the particular instruments driving their outcomes.

According to Alavuotunki et al. (2018), the implementation of Value Added Tax (VAT) has not necessarily resulted in increased inequality. They have discovered fairly robust evidence that when inequality is measured based on disposable income, countries with the VAT have experienced increases in inequality, whereas when inequality is measured based on consumption, countries with the VAT have not experienced increases in inequality following VAT adoption.

According to Boustan et al. (2013), the rising income inequality is related to bigger expansions in tax revenue and development in public consumption. Incomes and consumptions per inhabitant expanded in essentially all networks over the period to cover administrations like police and fire insurance, infrastructure maintenance, and school uses. Notwithstanding, they close by taking note that in spite of the fact that income inequality is related to more prominent public uses, it isn't certain that extra assets essentially convert into a larger amount or better caliber of public products. Besides, the occurrence of neighborhood tax assessment and the appropriation of nearby administrations need not be moderate and reasonable changes significantly across legislative units. Thus, it avoids guaranteeing that nearby government action entirely or somewhat makes up for the potential social ills related to income inequality. In any case, given the experimental examples recorded here, we contend that it is improbable that the social ills associated with disparity are because of a debilitating of the public area.

According to Tridico (2017), inequality harms government revenues (tax revenue) and fiscal performance because inequality easily leads to economic insecurity and financial crises, especially when the financial sector tries to compensate for lack of consumption and aggregate demand with credit availability and debt-led growth. Labor has been under constant pressure in this context, contributing to the worsening of income distribution and, as a result, the rise in inequality.

Tax Revenue and benefit schemes, according to Andreoli and Olivera (2020), have a significant independent effect on preferences for redistribution, even after accounting for many demographics and inequality indices. As a result, tax-benefit rules provide strong evidence that rising welfare state generosity increases support for redistribution while holding income risk, income levels, income growth, and country-time specific effects constant. Support for redistribution is also positively and significantly associated with the level of individual benefits relative to taxes, relative to the country-year size of redistribution. Raising the position of net benefits in the distribution, doubling the benefits-to-taxes ratio, or increasing net benefits relative to national fiscal (tax) revenues increases support for redistribution.

According to Ardanaz and Scartascini (2011), income inequality adversely influences monetary limit (tax revenue) by contending that legislative mal-allocation is one of many instruments that, by presenting a predisposition in political portrayal and gauging the interests of certain gatherings more than relatively in the approach cycle, can prompt results that are not really by the inclinations of a greater part of residents in fair systems. Subsequently, seeing explicit highlights of vote-based political foundations can go far in clarifying why a few nations are effective in seeking after moderate tax collection while in others, the degree for re-distributive approaches is significantly more restricted.

2.3 Income Inequality and GDP per Capita

Mdingi & Ho's (2021) analysis discovered many models connecting income disparity to economic development. The degree of economic growth, technical progress, social-political unrest, savings rate, credit market imperfections, political economy, institutions, and the fertility rate are among them. The researchers also discovered that the link between income inequality and growth might be harmful, positive, or ambiguous based on the transmission mechanisms of these models. They also stated that empirical findings on the connection between income disparity and growth are highly disputed.

The beginning incomes of countries influence the link between inequality and GDP per Capita growth. In the paper conducted by Brueckner & Lederman (2018), the panel model's estimates suggest that the link between inequality and GDP per Capita growth in nations' starting incomes is deteriorating. Instrumental factors regressions demonstrate that increasing income disparity boosts transitional growth in low-income countries. Inequality has a powerful detrimental impact on transitional growth in high-income countries. According to IV estimates, a one percentage point increase in the Gini coefficient reduces GDP per Capita growth by over one percentage point over five years for the median country in the world, which had a PPP GDP per Capita of around 10000USD in 2015. The long-run effect on the level of GDP per Capita is about 5%.

The link between income disparity and economic growth in Nigeria was investigated in the study made by Nwosa (2019) and the implications for economic development. The study used the autoregressive distributed lag estimation approach and spanned the years 1981 to 2017. The study's findings revealed that economic growth in Nigeria had a favorable but little influence on income disparity. As a result, the research suggests that the government ensures an equal sharing of economic benefits among the poor. Budget planning and distribution should also be pro-poor, focusing on increasing the welfare of the broader population rather than benefiting a few wealthy individuals. The implementation of the measures mentioned above and other welfare-enhancing policies will help Nigeria achieve more significant economic development.

Algeria has made substantial progress in its people's economic and social conditions in recent years, as seen by improvements in significant economic and social indices and a rise in the human development index from 0.577 in 1990 to 0.754 in 2018. According to Ameur & Seffih (2021), this progress is not evenly distributed between groups and areas. As a result, poverty and inequality continue to be severe issues for Algeria's administration. The authors of this study sought to investigate income disparity in Algeria and its influence on economic growth. They use accessible data to analyze the link between income inequality and economic development from 1980-2015 to meet the study's goal. The Algerian government must adopt policies promoting economic growth and creating more fairness in income distribution to guarantee sustainable and inclusive development.

In the study of Yang & Greaney (2017), the Engle-Granger two-step ECM method is used to estimate the long-run and short-run correlations between inequality and growth for four economies: China, Japan, South Korea, and the United States. The researchers' estimation results support the S-shaped curve theory linking GDP per Capita to inequality with varied starting points for the four economies. China, Japan, and the United States discovered a positive causal connection, showing that rising income disparity boosted economic development. Furthermore, they found mixed results regarding the impact of trade openness on inequality and growth. All nations, except for China, demonstrate an adverse effect of fiscal redistribution on GDP per Capita.

Hofer et al. (2020) looked at the spatial granularity of poverty statistics, significantly influencing how well resources are targeted to alleviate the poor's living situations. However, attaining granularity in family income and spending surveys or living standards surveys generally necessitates increasing sample numbers, which is not always feasible for government organizations conducting these surveys. The researchers claim that there is a significant positive relationship between income inequality and economic growth for low-income countries in the long run. In high- and middle-income countries, however, there is a negative but not statistically significant relationship. Furthermore, there is no statistically significant relationship between income inequality and economic growth when all countries in the sample are regressed together.

The EU's post-financial-crisis economic recovery is marked by sluggish and unstable growth and high levels of inequality. With differences in the conclusions reported in many empirical and theoretical studies of growth and development, the link between income inequality and economic growth rate remains a contentious subject. Boikova & Dahs (2018) looked at the effects of income inequality, poverty, and wealth on the Eurozone's economic growth rate. They discovered that income inequality has a statistically negligible influence on economic growth. Still, poverty and savings have a negative, statistically significant effect on growth, and financial assets have a positive, statistically significant impact on growth. They show that consumption has a statistically significant adverse impact on development. The researchers discovered that for all observations and average values per nation in the Eurozone, the connection between inequality and growth dynamics do not follow an inverted-U curve.

Given the discrepancies in various data across various income categories, income inequality, which depicts asymmetry in allocating income within society, should be examined. In the analysis of Albert et al. (2020), they used the low, medium, and high-income typologies suggested in earlier research papers to replicate the impacts of per capita income contractions on poverty and the whole income distribution during the coronavirus pandemic. The study also addresses some policy and data issues, recommending that the Philippine Statistics Authority begin reviewing its official poverty measurement system, including the current use of income over expenditure as a poverty metric, as well as the poverty line setting methodology, in light of changes in income and expenditure patterns over the last decade (before the onset of COVID-19). Even though these findings are based on simulation scenarios and simplistic assumptions, they help illustrate the importance of government efforts to provide social protection for the poor and segments of the income distribution that may be vulnerable to poverty due to reduced economic growth.

Inequality appears to have a detrimental influence on economic growth, according to the overwhelming evidence. Anyanwu, Anyanwu, & Cieślik (2021) proposed that nations with plentiful natural resources are more likely to have economic disparity. The researchers investigated the link between inequality and economic development in aid and non-resource great countries using the system generalized method of moments (GMM) dynamic panel estimate technique and data set for 1988–2012. Their findings show that wealth disparity has a more significant detrimental impact on economic growth in nations with plentiful natural resources. As a result, they argue that lowering income disparity can help to buffer the adverse effects of resource abundance on economic growth.

Ghosh (2020) investigated the symmetric and asymmetric effects of economic growth volatility on income inequality in the powerful ASEAN nations between 1980 and 2015. As primary control variables, financial development, trade openness as a proxy for globalization, inflation, human capital formation, and fiscal policy are used. The purpose of this study is to investigate the causal relationship between income inequality and economic growth volatility by looking at both the long-run and short-run dynamics in the time series structure. The researchers used the Clemente–Montanes–Reyes unit root test to find the structural break in the time series. In addition, the cointegrating connection of the time series data was investigated using the ARDL (linear) limits test technique and the nonlinear ARDL to make product comparisons in the long-run relationship between the variables. The empirical data imply a positive and statistically significant long-run cointegrating connection between income disparity and growth volatility. The findings of this study assist academics in better understanding the different policy improvements in the ASEAN area that are more transparent and can make these economies less vulnerable to hazards.

With the help of a panel model in which the relationship between inequality and GDP per Capita is dependent on nations' baseline incomes, Brueckner and Lederman (2018) estimated a relationship between inequality and GDP per Capita. They found that the relationship between inequality and GDP per Capita is substantially less in nations with higher initial incomes, according to their estimates of their model. The results of instrumental factors regressions show that increased income disparity helps accelerate the transitional growth of low-income countries. In high-income countries, inequality has a significant detrimental impact on transitional development, concise term. As a whole, the empirical findings lend credence to the concept that income inequality is good for transitional growth in impoverished nations but is harmful in high-income countries.

The study conducted by Pede et al. (2019) used provincial-level data from the Philippines over ten years (1991–2000) to explore the link between income disparity and economic development. The scale and importance of the inequality-growth link are not constant over location, as this study shows, and the magnitude might be exaggerated when spatial factors are not considered. In general, previous research on the link between income disparity and economic development has primarily ignored geographical factors. Geographically weighted regression (GWR) estimations were employed in this study to prevent this exclusion. The findings of this analysis support the notion that earlier studies that ignored geographical heterogeneity overstated the inequality-growth link, especially when comparing urban and rural regions.

According to Acemoglu and Robinsons (2002), political reforms and their subsequent influence, according to historical and contemporary evidence, are the driving force behind the curve's decreasing slope. The rising social tension and political instability that emerges from increased inequality on the upward side of the curve, in turn, causes these political upheavals. However, empirical research has shown that such a curve does not apply to all development pathways. There are two scenarios in which a Kuznets curve would not be induced by development, according to our model. To begin with, if inequality is low enough to allow all actors to invest, development can continue without escalating social tensions, and political transformation can be avoided. A country would experience significant economic development without increasing inequality in this section of the parameter space. The study proposes a Kuznets curve theory based on political economy. When inequality rises as a result of development, it can lead to political unrest and drive political elites to democratize. Institutional improvements as a result of democracy increase redistribution and reduce inequality. However, development does not always result in a Kuznets curve, and there are two types of nondemocratic paths that might be linked to development: an "autocratic disaster" with high inequality and poor output, and an "East Asian Miracle" with low inequality and high output. Because inequality does not increase with the progress or because political mobilization is limited, these issues occur.

According to Milanovic (2016), over the last half-century, inequality economists have relied heavily on the Kuznets curve to analyze the relationship between development and inequality. The Kuznets curve, on the other hand, progressively faded out of favor because its prediction of low inequality in highly wealthy societies could not be reconciled with the steady rise in income disparity that began in almost all developed countries in the late 1970s (see the long-run graphs for the US and the UK). Many individuals resented it in this way. During the second half of the twentieth century, the Kuznets curve was extensively employed to describe the relationship between growth and inequality, but it has fallen out of favor in recent decades. According to this column, the current rise in inequality can be seen as a continuation of the Kuznets curve. Technological advancement, inter-sectoral reallocation of labor, globalization, and policy all play a role in it, as they did in the first. In this second Kuznets wave of the modern age, according to the author, the United States has not yet reached the apex of inequality.

According to Regmi and Hoover (2000), despite the fact that the Kuznets curve fits the income disparity patterns in Brazil, Botswana, China, and Thailand, each country's economic and social landscape differs significantly. Because we're only looking at a 40-year period, the long-term and future trends of income disparity may differ. In particular, if there are major economic shocks, high inflation, and a lack of job opportunities, inequality may rise and become an S-shape curve. While empirical evidence from Botswana, China, and Thailand suggests that with sustained economic expansion, inequality tends to decrease. Importantly,

evidence from Brazil suggests that even decades of GDP per capita growth may not always result in a reduction in income inequality. This discovery necessitates more investigation into the relationship between income disparity and growth. Implementing equitable distribution policies, in addition to maintaining high levels of economic development, is critical in closing the income gap. Despite these countries' impressive growth stories, there is still a significant income gap between the bottom 20% of the population and the top 20% of the population. Only a slew of legislative changes and targeted initiatives to improve the poor's income prospects and assure their upward mobility will be able to remedy such glaring inequity.

2.4 Synthesis

In economics, income inequality is a significant disparity in income distribution between individuals, organizations, communities, social classes, or countries. Inequality in income is a crucial factor in the formation of social strata and social classes in society. Many other sorts of inequality, such as money, political power, and social position, impact and are influenced by it as well as influence it. When it comes to quality of life, income is a critical factor, has a significant effect on the health and well-being of individuals and families. Income varies according to social variables such as gender, age, and race or ethnicity.

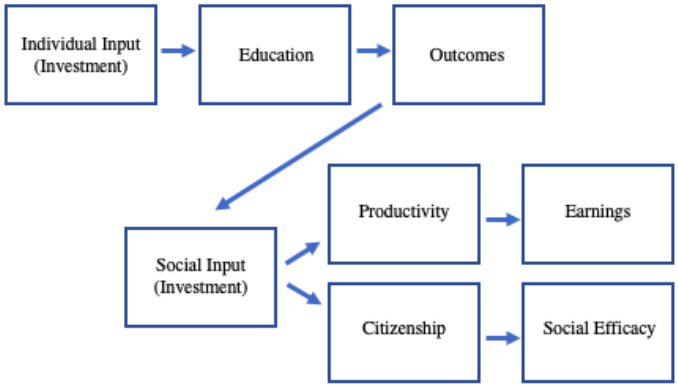
As defined by the World Bank, income inequality is the severe concentration of income in the hands of a relatively small percentage of the population. It is frequently described as the difference between the richest and the rest of society. In addition to this, it can refer to either the distribution of income or the distribution of wealth. In both economic theory and economic policy, income distribution has always been a source of concern. The purpose of this study is to determine whether or not educational expenditure, tax revenue, and GDP per Capita have a statistically significant impact on income disparity. A survey of related literature enabled the researcher to identify and list several studies that addressed the relationship between educational expenditure, tax revenue, GDP per Capita, and income disparity. Many studies have found that educational expense has a considerable impact on income disparity. This is especially true for educational expenditure.

The link between education and income inequality has long been a source of economic debate. According to Shahabadi et al. (2018), wealth disparity harmed the Islamic world between 1990 and 2013. Their research found that primary and secondary school enrollment has a statistically significant negative influence on income inequality, but university enrollment has a statistically significant positive effect. According to the study, education boosts low-income workers' productivity by improving their job prospects. The rising expertise and salary of university graduates deepen the social class gap. Higher education might help alleviate poverty and economic disparity if governments funded it similarly that primary and secondary schools are. Franko (2021) explored how state fiscal policy adjustments in response to the financial crisis affect income disparity in the state. State governments are vital in budgetary duress because they are compelled to make challenging tax and expenditure decisions. Taxes and spending are both policies that widen the income divide. The study of state inequality must focus on times of budgetary stress since those with fewer resources are more likely to feel the effects of their state's fiscal reaction. According to this study, which relies on time-series cross-sectional data, income disparity grows as conditions respond to the economic crisis by cutting unplanned spending. These effects will likely outlive the initial economic collapse.

The aggregate relationship between state policy responses and inequality is also examined in numerous post-recession surveys. People will be worse off financially if their states prioritize budget cuts in reaction to economic collapse. The findings have implications for future inequality in the US and future state budget reform efforts. Nwosa (2019) examined the relationship between income disparity and economic growth in Nigeria and the implications for economic development. The study employed autoregressive distributed lag estimation and covered 1981-2017. The study found that economic growth in Nigeria has a positive but minor impact on income disparities. Because of this, researchers advise governments to ensure equal economic benefits for the poor. Budgeting and distribution should also be pro-poor, focusing on enhancing overall welfare rather than just a few wealthy individuals. The above initiatives, as well as other welfare-enhancing policies, would help Nigeria thrive economically.

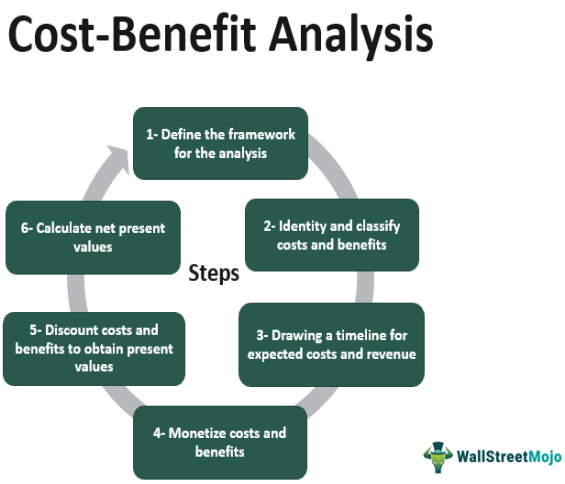
2.5 Theoretical Framework

Human Capital Theory. It refers to the store of habits, knowledge, social and personality characteristics of a single individual who can do labor and generate economic value as a result of their efforts. Education is one indicator of the monetary value of a person according to human capital theory; the more significant the education of a person, the greater its economic value. The value of an individual in education is also essential for the economy, as was previously mentioned.



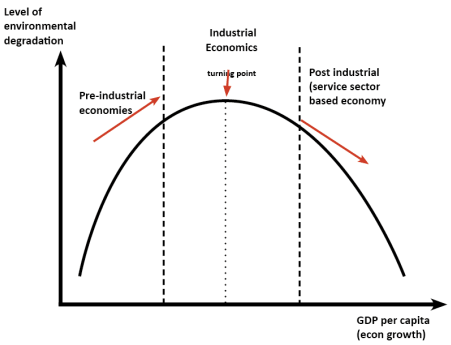
Source: Swanson and Holton (2001)

Benefit Principle. It refers to the amount of tax that taxpayers pay, the levels of which are automatically decided since taxpayers pay a proportionate share of the costs of the government benefits that they receive. Most of the time, those who pay taxes are the ones who gain from public services. People who fall below the middle class are denied the opportunity to use social benefits, which is in line with the growing income disparity.



Source: WallStreetMojo by (Vaidya)

Kuznets Curve. When an economy develops or grows, the theory is that market forces will first raise and subsequently diminish economic inequality, resulting in which the economy will prosper. Economic development or growth is a hypothetical curve that plots economic inequality versus per Capita income over time.



Source: Tejvan Pettinger (2019)

2.6 Conceptual Framework

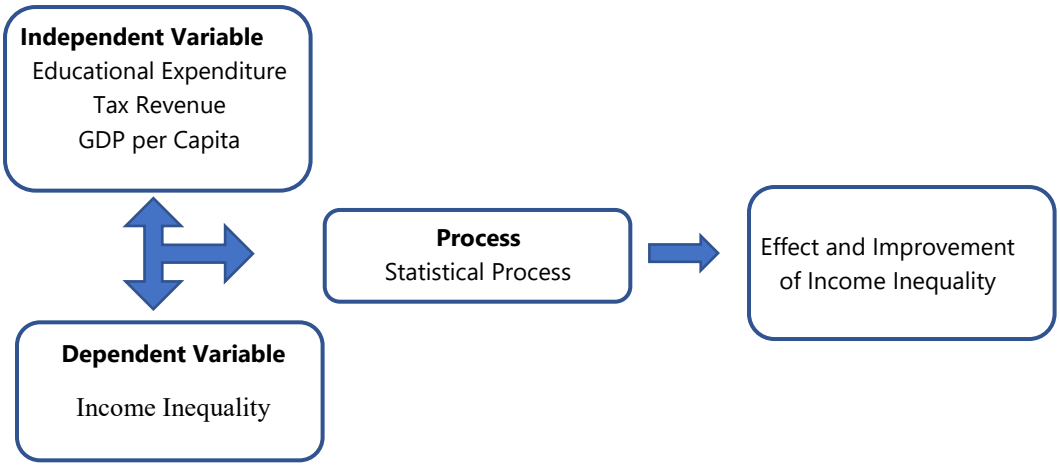


Figure 1. Factors Influencing Income Inequality in the Philippines

3. Research Methodology and Design

3.1 Research Design

Using economic variables such as educational expenditure, tax revenue, and GDP per Capita, the study tries to discover the factors that influence income inequality in the Philippines. The researchers will use a quantitative technique to determine the relationship between our dependent variable, income inequality, and our independent variables, educational expenditure, tax revenue, and gross domestic product per Capita.

3.1.1 Dependent variable:

- ***Income Inequality* (IE)**. One of the essential aspects in determining a country's economic progress. It calculates the amount of income difference in each population.

3.1.2 Independent variables:

- ***Educational Expenditure* (EE)**. This is a term used to denote the amount of money set aside by the government for education. The word refers to educational spending on schools, universities, and other public and private institutions.
- ***Tax Revenue* (TR).** This is the amount of money raised by taxes, including income, earnings, social security contributions, taxes on products and services, payroll taxes, and everything else.
- ***GDP Per Capita* (GDPPC)**. This is a measure of a country's economic production that considers the population. It divides the gross domestic output by the number of people in the country. This also aids in determining a person's standard of living. It also aids in determining whether the government is worried about its citizens.

3.2 Data Gathering Procedure

The researchers gathered the data using the Secondary method for data collection to answer the problems of the study. It aims to focus on the relationship and predictive assessment among dependent variables and independent variables.
This research has used secondary data from 2000 to 2019. There is different source from which data have been collected: World Bank, Philippine Statistics Authority Database, and Department of Budget and Management Database.

3.3 Statistical Treatment of Data

To determine the relationship between the dependent variable, income inequality, and the independent variables, educational spending, tax revenue, and GDP per Capita, the researcher will use statistical tools such as Microsoft Excel and Statistical Package for the Social Sciences (SPSS).

The following parameters will be used to assess the study's analytical procedures:

Multicollinearity Test. The condition of the independent variables has extremely high intercorrelations or inter-associations. As a result, it's a form of data disruption, and if it's present, statistical inferences drawn from the data might be suspect.

When one of the regressors can be linearly predicted from the other values of the econometric model with a significant degree of accuracy, multicollinearity exists in the model, as mentioned earlier. This phenomenon makes the model biased. To identify a multicollinearity issue in the model, the Variance Inflation Factor (VIF) and Tolerance statistics (TOL) were employed.

VIF is computed using the formula: $$VIF = \frac{1}{1-R^2}$$

Where R^2 is measured by conducting an auxiliary regression of each regressor, this can be done by regressing the regressor of interest onto the other regressors in the regression model. Using VIF, to reject the null hypothesis of having no multicollinearity, the computed value of VIF must not be greater than 10.

TOL is computed using the formula: $$TOL = \frac{1}{VIF}$$

The higher the TOL statistics to 1, the higher the possibility of not rejecting the null hypothesis with no multicollinearity.

Durbin-Watson Test. The ratio of the number of squared differences in successive residuals to the residual sum of squares is used to measure the Durbin-Watson test. The d-statistic in the residuals shows whether or not there is an autocorrelation at lag 1. To reject the null hypothesis of no serial association, the statistic must be less than dL (lower bound) or more outstanding than dU to reject the null hypothesis (upper bound). The critical values of dL and dU can be found in the d table, taking into account the number of observations and regressors in the model.

Durbin-Watson statistics are computed using the formula: $$d = \frac{\sum_{t=2}^{T}(e_t - e_{t-1})^2}{\sum_{t=1}^{T} e_t^2}$$

Where e_t is equal to, and Y_i $\hat{Y}_i$ are, respectively, the observed and predicted values of the response variable for individual *t*.

The Hypotheses for the Durbin Watson test are: (first-order correlation, the lag is a one-time unit)

H0 = no first-order autocorrelation.

H1 = first-order correlation exists.

Multiple Regression. It explains the relationship between multiple independent or predictor variables. A dependent variable is modeled as a function of several independent variables with corresponding coefficients and the constant term. The multiple regression equation takes the following form:

Y=mx1+mx2+mx3+b

Where:

Y = the dependent variable of the regression , M = slope of the regression, X1 = first independent variable of the regression, X2 = second independent variable of the regression, X3 = third independent variable of the regression, and B = constant.

4. Presentation and Analysis of Data

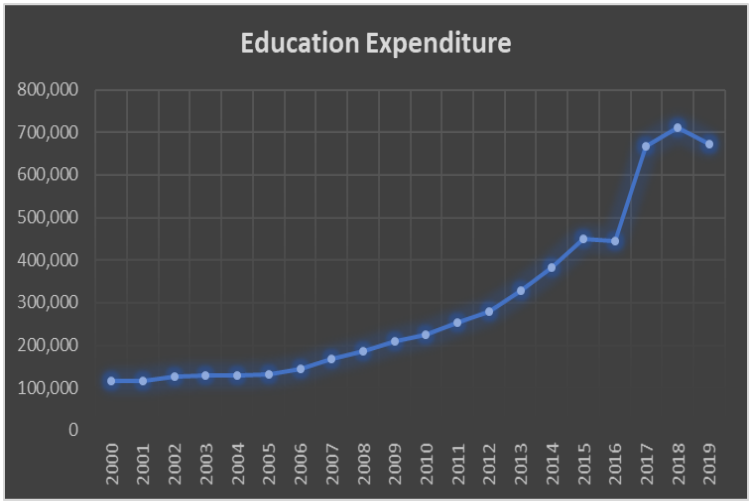
4.1 Data Used

By utilizing the statistical methodologies given in Chapter 3, as well as secondary data from World Bank Data, which was cross-referenced with data from the Department of Budget and Management and the Philippine Statistics Authority (PSA),

Table 1. Current Situation of the Philippines from 2000 to 2019 based on Income Inequality (Gini Coefficient).

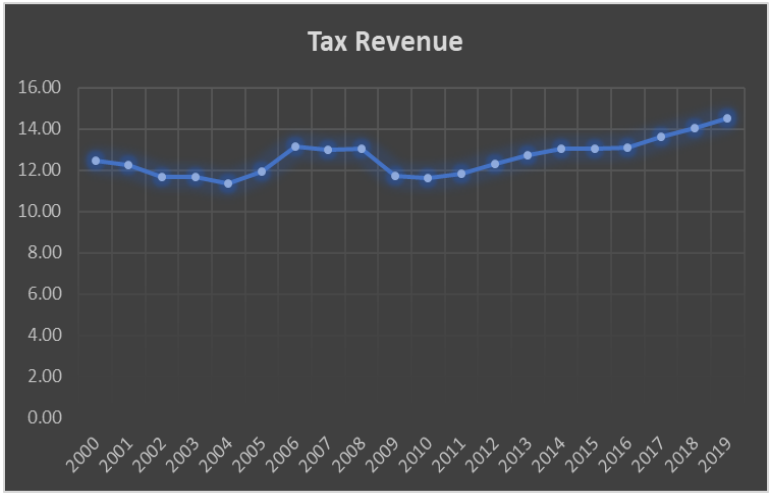
Source: Philippine Statistics Authority (2000-2019)

Table 2. Situation of the Philippines from 2000 to 2019 based on the Educational Expenditure.



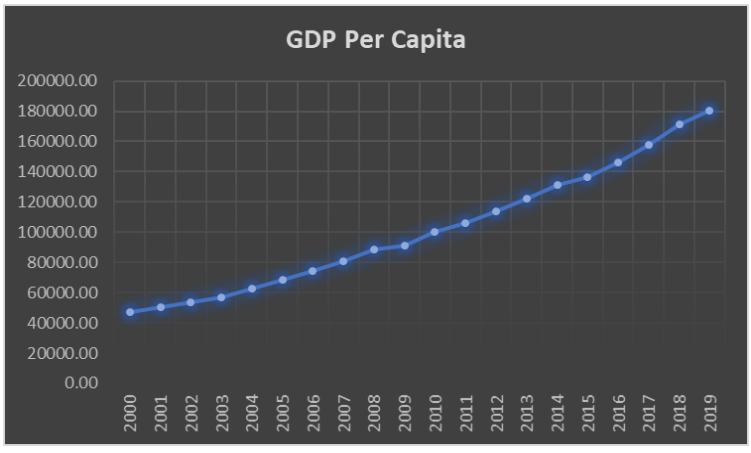
Source: Department of Budget and Management (2000-2019)

Table 3. Situation of the Philippines from 2000 to 2019 based on Tax Revenue.



Source: World Bank Data (2000-2019)

Table 4. Situation of the Philippines from 2000 to 2019 based on GDP Per Capita.



Source: World Bank Data (2000-2019)

4.2 Regression Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.994[a]	0.988	0.985	0.22593	0.988	428.026	3	16	0.000	1.366

a. Predictors: (Constant), GDP Per Capita, Tax Revenue, Education Expenditure

b. Dependent Variable: Income Inequality

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	128.027	3	42.676	4.836	.008[b]
	Residual	229.440	26	8.825		
	Total	357.467	29			

a. Dependent Variable: Income Inequality

b. Predictors: (Constant), GDP Per Capita, Tax Revenue, Education Expenditure

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	51.005	1.174		43.432	0.000					
	Education Expenditure	-3.891E-06	0.000	-0.413	-4.002	0.001	-0.981	-0.707	-0.111	0.072	13.836
	Tax Revenue	-0.107	0.100	-0.049	-1.071	0.300	-0.797	-0.259	-0.030	0.365	2.737
	GDP Per Capita	-2.484E-05	0.000	-0.552	-5.760	0.000	-0.985	-0.821	-0.160	0.084	11.948

a. Dependent Variable: Income Inequality

4.2.1 Interpretations

The Pearson R, also known as the r-value, is 0.994 based on the results presented. In this case, the development of 99.4 percent out of 100 indicates a positive link. Using the independent variables Tax Revenue, GDP per Capita, and Educational Expenditure, it can determine the dependent variable Income Inequality.

The model's R-squared, also known as the coefficient of determination, is 0.988. Approximately 98.8 percent of the variation in the dependent variable can be explained by chance. The independent variables of tax revenue, GDP per Capita, and educational expenditure all contribute to the explanation of income inequality.

It is calculated that the model's adjusted r-squared is 0.985. The independent variables, Tax Revenue, GDP per Capita, and Educational Expenditure, can explain around 98.5 percent of the variation in the dependent variable, Income Inequality.

The Durbin Watson test yielded a value of 1.366, indicating a positive correlation. The variables have an inverse relationship, as explained by the fact that the smaller income inequality is, the more excellent the GDP per Capita is.

The findings indicate that there is a statistically significant difference of 0.000 or 1.74729710112866E-15, which is less than 0.05. This suggests that the null hypothesis, which states that "There is no statistically significant relationship between income inequality and its components," is invalidated. The model provided above indicates a statistically significant association between the dependent variable Income Inequality and the independent variables Tax Revenue, GDP per Capita, and Educational Expenditure. The data support this conclusion.

4.2.2 Interpretation of Coefficients

Constant Value: This signifies that there will always be a 51.005, regardless of whether the situation changes.

Tax Revenue: There is a significant relationship between Tax Revenue, and Income Inequality is -0.107, which suggests that for every rise in Tax Revenue, there is a drop in Income Inequality of -0.107.

GDP per Capita: For every unit increase in income inequality, there is a unit increase in GDP per Capita of -2.484E-05 because the more significant the income disparity, the greater the impact on GDP in terms of income most people.

Educational Expenditure: Educational Expenditure has a value of -3.891E-06 for every unit that has changed, indicating that it should be a priority for all of us, regardless of whether it is increasing or decreasing. This is because providing education to all people will benefit all variables.

Multicollinearity Testing is performed to determine whether the independent variables are associated with one another. VIF (Variance Inflation Factors) allows you to see the results of the multicollinearity test and the outcomes of the test. The researcher gave the VIF a maximum score of 10 as a standard. If it didn't reach 10, Multicollinearity is not present in the model. The model outcomes were 2.737 in terms of tax revenue, 11.948 in terms of GDP per Capita, and 13.836 in terms of educational expenditure. GDP and Educational Expenditure were above the maximum benchmark of 10. It is accepted that multicollinearity exists in the model.

The researcher also picks a level of significance of 0.05, which is the lowest possible value. It is used to determine the relationship between a dependent variable and an independent variable (or vice versa).

Decision Rule: If the value is less than 0.05, the null hypothesis should be rejected and accept the alternative view.

	Sig
EDUCATION EXPENDITURE	**0.00102864424992962**
TAX REVENUE	**0.29986731731121**
GDP PER CAPITA	**0.00002926332961196**

Educational Expenditure*:* Educational Expenditure has a statistically significant value of 0.00102864424992962 in the model mentioned above; as a result, we reject the null hypothesis, leading to the conclusion that there is a statistically significant association between Income Inequality and Educational Expenditure.

Tax Revenue*:* Tax Revenue has a statistically significant value of 0.29986731731121
in the model above; as a result, accept the null hypothesis, leading to the conclusion that there is no statistically significant association between Income Inequality and Tax Revenue.

GDP per Capita: GDP per Capita has a statistically significant value of 0.00002926332961196 in the model as mentioned above; as a result, we reject the null hypothesis, leading to the conclusion that there is a statistically significant association between Income Inequality and GDP per Capita.

5. Summary and Recommendations

5.1 Conclusion

The primary goal of this research is to establish if tax revenue, GDP per Capita, and education expenditure have a significant impact on income inequality in the aggregate. The Human Capital Theory, the Benefit Principle, and the Kuznets Curve have all significantly influenced the research.

The annual data used was gathered from the Philippine Statistics Authority, the Data World Bank, and the Department of Budget and Management (DBM) and analyzed using the statistical software packages SPSS Statistics and Microsoft Excel. Multiple regression analysis, linear regression, the Durbin-Watson test, and the multicollinearity test were performed using the SPSS statistical package. In chapter four, the data collection outcomes were examined and then interpreted based on the findings. The development of the study and recommendations for future research will be explored in this chapter.

Income Inequality in the Philippines has a significant relationship with Tax Revenue, GDP per capita, and Educational Expenditure, according to the study. Tax Revenue, GDP per capita, and Educational Expenditure may account for 99.4 percent of changes in Income Inequality. GDP Per Capita was shown to be the most significant independent variable with a statistically significant value of 0.00002926332961196. Following, Educational Expenditure has a statistically significant value of 0.00102864424992962. And, Tax Revenue has a statistically significant value of 0.29986731731121. Furthermore, the researcher used to relate this to Human Capital theory, which is the ability of one person or the capability of one person to act in the country under study based on its education, taxation, and contribution to GDP, which will lead to the possibility of determining Income Inequality.

5.2 Recommendation

Based on the findings of the study and the data gathered, the researcher made the following recommendations:

- Because many people need help to achieve progress in their life as a result of their income, the government should focus on minimizing income inequality. To prevent economic inequality in the Philippines, the government should be aware of or create a policy to help the poor, in particular.
- To promote the benefits of education to all people, education is better since it may be applied as a beginning point when you are out in the real world, even if it is not in the Philippines. This is certainly true for individuals who cannot afford to attend school but should be given a chance.
- Because we all pay or will pay taxes in the future, the government must do everything in its capacity to fulfill its commitments. They must be able to observe or experience the effects of their activities. It should not be wasted in the trash because it is the money of the people's country.
- The government should be aware of the need to distribute the funds. One of the reasons why Income Inequality exists is because of the lack of transparency in how people allocate their money.
- The government should improve its educational spending since giving educational opportunities to everyone leads to a better economy in terms of both economics and the public good.
- The government must be conscious that the Philippines has a higher level of income inequality, but it refuses to acknowledge this fact. Let's say that the state can solve the problem of income disparity. As a result, major changes will take place in the economy and in all aspects of society.

Funding: This research received no external funding

Conflicts of Interest: The authors declare no conflict of interest.

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