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

Assessing The Impacts of TRAIN Law on Consumption, Savings, and Unemployment in the Philippines

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| ABSTRACT
The Tax Reform for Acceleration and Inclusion (TRAIN) policy intends to make the tax system simpler, fairer, and more efficient while also encouraging investments, job creation, and poverty reduction. This tax reform package 1 lowers personal income taxes, removes VAT exemptions, and changes the excise tax on petroleum goods and automobiles, making the tax system more equitable while simultaneously rectifying injustice. This study determines the relationship between the TRAIN Law and the increase in income on the country's consumption, savings, and unemployment rate. Using the multiple regression analysis, this study proves that TRAIN Law and the additional income positively affect consumption. The savings also has a significant positive relationship with the increase in income; however, it has a significant negative relationship with TRAIN Law. This study also shows that while the unemployment rate in the country decreases when income rises, the TRAIN law, on the other hand, relates to the increase in the unemployment rate. The results of this research suggest that the said tax reform has had a considerable beneficial impact on consumption, it has had an adverse influence on the growth rate of savings and unemployment in the country, hence in order to improve the delivery of essential services and better future social and economic results, the government should consider modifying the TRAIN Law and introducing a tax or policy that would stimulate private savings and employment.

| KEYWORDS

Consumption, Income, Savings, Train Law, Unemployment

| ARTICLE DOI: 10.32996/jefas.2022.4.1.3

1. Introduction

Taxation is used by governments as a policy tool to accomplish a number of goals, including income redistribution, economic stabilization, public goods provision, and economic development. In the Philippines, the 20-year-old appraisal scheme has been reformed in an attempt to make the cost structure more appealing to the taxpayers. President Rodrigo Roa Duterte signed into law the Tax Reform for Acceleration and Inclusion (TRAIN) by virtue of Republic Act No. 10963. TRAIN Law is the first in four packages of the Comprehensive Tax Reform Program, according to the Department of Finance, which took effect on January 1, 2018. The Department of Finance indicated that the objective of the TRAIN Law is to create a simpler, fairer, and more efficient tax system, which will also promote investments, create jobs, and reduce poverty. This tax reform package 1 reduces the personal income taxes for taxpayers, reduces VAT exemptions, and adjusts the excise tax on petroleum products and automobiles, making it fairer while also correcting the inequity of the tax system. This package ensures income tax cuts for Filipino taxpayers while simultaneously collecting funds to support the increased government spending for the program launched by President Duterte, which aims to increase infrastructure spending.

In this context, income tax effects on income distribution must be understood. This means that the aggregate impact of any tax policy reform should be studied for the economy as a whole, with a special emphasis on the effects of the tax on various types of households and production sectors (Benjasak & Bhattarai, 2021). According to earlier findings by Furman (2006), the tax system has a significant effect on income because it affects the incentives for economic decisions such as working and saving, as well as

the allocation of money for societal improvement. The government planned to reduce the tax burden on low-income earners while raising taxes on high-income earners.

In the Philippines, Region 1 has the lowest minimum salary with 280 to 340 pesos per day, a monthly salary of 9,000 pesos, and an annual income of 114,000 pesos. Whereas an average Filipino worker with a minimum salary in NCR, which is the highest, is 500 to 537 pesos per day, a monthly salary of 15,000 pesos, and an annual income of 180,000 pesos, all of which qualify them for tax exemption. On the other hand, according to Vega (2018), the TRAIN Law has resulted in a price increase in everyday goods for Filipinos. Hence, two years after the TRAIN Law was enacted, the Department of Finance (DOF) released an article in the Manila Bulletin (2019) claiming that 17.6 million Filipinos still lack adequate salaries to afford basic necessities, contradicting their goal of eradicating poverty in the Philippines. Thus, taxes raised from taxpayers are used to finance the program, which is aimed to increase infrastructure spending and develop industries that will result in strong growth, job creation, and improved living conditions for Filipinos. They are also used to finance rice tariffication, educational funds for state universities, and cash subsidy programs, all of which are said to benefit all Filipinos (Cororatona et al., 2019). Because of the TRAIN Law, most low to middle-income earners are now tax-free, but taxpayers are now burdened by increases in excise tax and the price of essential goods, thus limiting their capacity to save.

Since the implementation of the TRAIN Law, a lot of sectors believed that this law is a 'burden' for poor people as it had caused untold sufferings of the impoverished due to the higher inflation that affects the rice, fish, and all the vegetables where it increases the prices radically (Beltran & Litonjua, 2018; Pregoner, 2020). Moreover, the increase in prices, especially the basic goods, has hit the poor Filipinos the hardest. Households with low and middle incomes spend a much higher percentage of their income than those with high incomes (Beltran & Litonjua, 2018). It is said that during the deliberation of this law, Duterte mentioned that the inflation rate would be only up to 4% and this tax law would only affect the rich people; however, the inflation rate already reached 4.5%, which affects the 86% of people who are mainly affected by this law which is based from the statistics of Pulse Asia. The cost of living of Filipinos has been significantly affected by the dramatic change brought about by the implementation of the TRAIN Law.

The objectives of this study include:

- Study and measure the change in consumption after the TRAIN law was enacted.
- Analyze and determine the savings of individuals involved during the implementation of the TRAIN law.
- Assess the implementation of TRAIN Law on the change of unemployment among workforces in the Philippines.

The main focus of this study is on the impact of the TRAIN Law and the growth rate of income on income earners, specifically how it affects their consumption expenses, savings, and the unemployment rate in the country. The researchers must assess the differences between personal income tax, excise tax, and VAT under the TRAIN Law based on each individual's consumption, savings, and unemployment. Through this, the study will help the policymakers to identify the effect of implementing the tax reform for acceleration and inclusion (TRAIN) on taxpayers, which has its advantages and disadvantages. Furthermore, this study will provide a deeper understanding of how the imposing of tax will affect the consumption, savings of income earners, and unemployment in the country.

This study will further discuss the perceived effects of the TRAIN law and the growth of income on the consumption, savings, and unemployment of various income earners in the Philippines. Moreover, this research will evaluate the fulfilment of a comprehensive tax reform program that aims to provide a simple and fair tax system, reduce poverty, and support increased government spending. This study will also help the taxpayers, specifically the low and middle-income consumers, employees, and those unemployed, understand how their tax expenses and income will be adjusted. Furthermore, this would also improve their knowledge of the TRAIN Law and provide them with an understanding of which commodities, savings, and unemployment have been impacted by the tax reform.

1.1 Theoretical Framework

The theories that the researchers used to study the underlying link between train Law and income to consumption, savings, and unemployment rate are presented in this section. Using the Keynesian (1973) model assumes tax policy can influence the economy by changing the overall demand for goods and services (Page & Smetters, 2017).

Keynes (1936) listed six objective elements impacting the desire to consume in his General Theory, two of which are taxes and income distribution.

Consumption function in the short run:

$$C = a + bY$$

Wherein:
C is the consumption
a is the autonomous consumption or consumption when income is zero (0).
b is the marginal propensity to consume
Y is the disposable income
This simple linear equation shows the general form of the relationship between income and consumption.

Tax changes on the consumption:

$$\Delta C = b\Delta Y$$

Wherein:
ΔC is the change in consumption when tax increases or decreases
b is the marginal propensity to consume
ΔY is the change in disposable income when there's an increase or reduction in taxes.

This equation is an identity that characterizes savings in the absence of taxation:

$$S = Y - C$$

Wherein:
S is the savings
Y is the disposable income
C is the consumption

Tax changes on savings:

$$\Delta S = \Delta Y - \Delta C$$

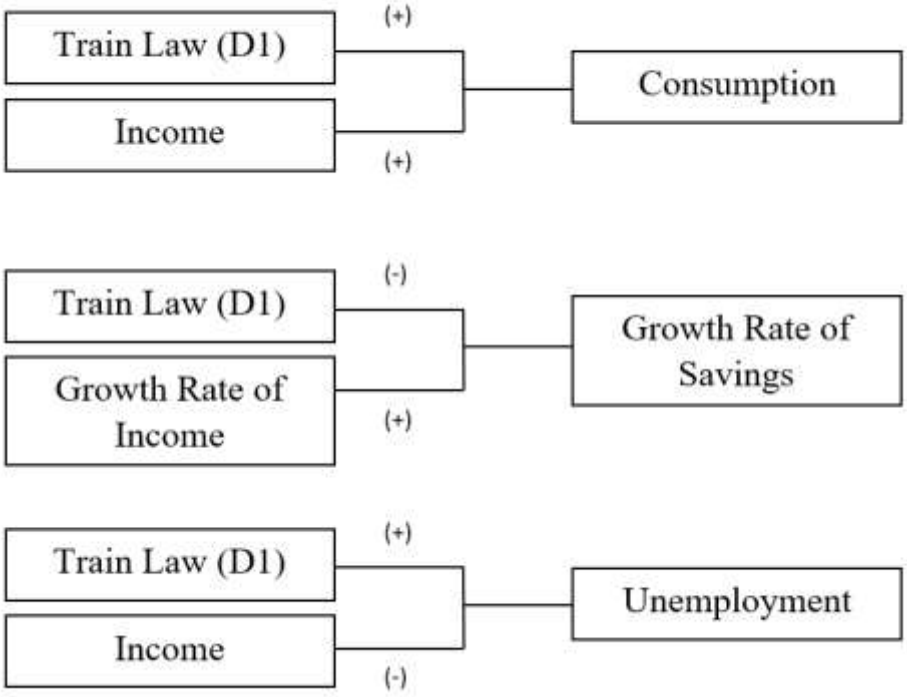
Wherein:
ΔS is the change in savings
ΔY is the change in the disposable income when there's an increase or reduction in taxes.
ΔC is the change in consumption.

The labor function considering unemployment is presented as:

$$\boldsymbol{L}=(\mathbf{1}-\boldsymbol{u})\boldsymbol{N}$$

Wherein:
$\mathbf{1}-\boldsymbol{u}$ represents the employment rate
$\boldsymbol{u}$ is the unemployment rate
$\boldsymbol{N}$ is the number of people or the population

1.2 Simulacrum



2. Literature Review

2.1 Tax Reform in the Philippines

The role of taxation is to impose and demand contribution on the basis of people, estates, or privileges in order to generate income for public use and is necessary for the survival of an autonomous state (Talmadge, 2000; Goodnow, 2017). Taxation may be understood as an implied contract between the government and taxpayers if tax fees are paid in trade for public goods and services supplied by the state (Feld & Fey, 2007; Bird et al., 2008; Luttmer & Singhal, 2014). However, despite the fact that these taxes are available for public use, taxpayers cannot request a particular service from the government in exchange for the taxes they paid; the taxes collected are only used for general public consumption. It is based on the idea that no government or state will function without taxes (Luciani, 2015). Discretion and selectivity in tax policy and administration should be minimized (Rao & Rao, 2006), all of which are critical for the soundness of the tax system and its acceptability and reliability (Capasso et al., 2020).

According to Asher and Rajan (2001), the Philippines has one of the highest VAT rates in Southeast Asia, as well as the greatest number of exemptions. The Tax Reform for Acceleration and Inclusion (TRAIN) Act, the first package of the Comprehensive Tax Reform Program, was signed into law by Duterte's administration after 20 years of no adjustments to tax rates and brackets. A justifiable basis for establishing a fair, effective, and simple tax system is tax reform (Emran & Stiglitz, 2005). According to Greenstone et al. (2012), the theory of tax reform has evolved significantly over time in response to shifting perceptions of the government's position. The conventional method of raising taxes to fund a broad public sector without much concern for economic consequences has been abandoned with the shift in development policy in favor of market-determined resource allocation. When it comes to reforming a new tax structure, jobs and poverty are critical aspects of how taxpayers will respond to economic changes. The Department of Finance says by offering significant income tax cuts to the majority of Filipino taxpayers, this tax reform bill corrects a long-standing inequity in the tax system. To keep the economy competitive, recent reform approaches have concentrated on minimizing tax policy distortions (Rao, 2000). The initial reductions in the marginal tax rates effectively inject more income into the economy (Amir et al., 2013).

However, according to Manasan (2017) study about the Tax Reform Law, despite its attempts to transform the tax system, the Philippines has a lower rate of revenue return than its ASEAN neighbours. For low and middle-income families, the tax structure is a mixed bag (Burman, 2005; Newman & O'Brien, 2011). As a result of moving so much economic assistance into the tax system, tax reform will result in a significant reduction in income assistance for low and middle-income families. Because of the reduced personal income tax brought by TRAIN policy, most taxpayers, particularly low and middle-income earners' take-home pay, would be substantially increased. However, except for high-income earners, those with low and middle income are now burdened by a rise in the excise tax and the cost of basic goods (Burns & reside, 2016; Pregoner et al., 2020). Similarly, in the US, Trump's proposed and enacted individual and corporate tax cuts lower tax burdens for all families but disproportionately support those in the top

percentile. This policy aggravates income inequalities which are still apparent in the Philippines (Sugeno & Yahata, 2016; Morgan & Trinh, 2021).

2.2 Income tax cuts in the Philippines

In the Philippines, income is a major contributor to economic growth, and last December 19, 2017, President Rodrigo Roa Duterte signed into law the Tax Reform for Acceleration and Inclusion (TRAIN) as Republic Act No. 10963. The reduction in personal income tax, which results in higher take-home pay and additional opportunities to save, is one of the most well-publicized aspects of the TRAIN legislation. According to Dizon (2021), a fiscal policy can be efficient in terms of reducing economic distortions and fostering economic growth, but it can also be fundamentally unequal in terms of income allocation. Under the TRAIN law, income for all classes increased to reduce poverty and promote economic development (Bonghanoy et al., 2019). This trade-off has long been a source of debate in the search for the perfect taxation theory. As stated by (Amir et al., 2013), income disparity rises as a result of policies like lowering the marginal tax rate on personal income tax and introducing a flat tax rate on corporate income tax, which benefits households with the highest income brackets the most.

Low and middle-income households consume a much greater share of their income than high-income households (Burman, 2005; Beltran & Litonjua, 2018). In the United States, the prevalence of progressive income and estate tax systems, as Piketty and Saez (2003) point out, has prevented a rapid recovery of wealth inequality following the Great Depression and WWII. Indeed, when it comes to taxation and inequality, Saez (2004) concludes that direct and progressive taxation, both short and long term, is necessary for the distribution. In comparison, Denvil and Peter (2016) concur with Saez (2004). The authors discovered a positive association between increased tax progressivity and lower-income inequality by analyzing the effects of progressivity adjustments in income tax structures and the effect of those changes on income inequality degrees. In addition, Brys et al. (2016) stress the importance of assessing the overall tax system for productivity and equity effects in order to encourage sustainable economic development. The authors (Alvez & Alfonso, 2019) emphasize the need for higher tax progressivity and stimulate higher productivity in tax administrations, among other items, to reduce the trade-off between efficiency and equity targets. Due to the higher progressivity of income taxes as opposed to other tax sources, Johansson (2016) demonstrates that shifting taxes from income to consumption taxes reduces inequality; however, indirect taxes are less detrimental to development than income taxes.

According to a study conducted by Sugeno and Yahata (2016), the Philippines has the highest rate of income inequality among members of the Association of Southeast Asian Nations (ASEAN), with a Gini coefficient of 43.0 in 2013. Additionally, due to COVID-19, income inequality has become even more apparent as, according to Morgan and Trinh (2021), while the poor are still attempting to obtain essential food products, the wealthy are indulging in the finer aspects of life. The unexpected role of income taxation as a negative factor in income inequality may be attributable to an inefficient progressive tax system that taxes multiple individual income sources in different ways, thus expanding income disparities (Dollar & Kraay, 2002).

2.3 Reduced Income Tax on Consumption

According to Amir et al. (2013), in a balanced budget, the Personal Income Tax reduction is more directly related to final consumption than the Corporate Income Tax reduction; therefore, the former provides a greater stimulus to household demand, resulting in an increase in economic growth which is more than twice as much as in the latter. In an unbalanced budget, the rise in real household consumption puts upward pressure on domestic prices and the average real income. The local cost of production rises as a result, and domestic companies lose a competitive advantage in the foreign market (Bonghanoy et al., 2019). A consumption tax that replaces an income tax has a significant intertemporal impact (Hall, 1996).

The income tax system is especially valuable to low-income families. Reduced tax rates, for example, significantly increase take-home wages for employees (Burman, 2005; Amir et al., 2013; Morini & Pellegrino, 2018; Berisha, 2019). Based on income effects, those that have more disposable income as a result of tax reductions will presumably have a higher demand for certain items. According to Parker's (1999) study, a one-dollar increase in expected income boosts nondurable spending by around 20 cents. Many tax-reform plans would move from an income-based tax to a consumption-based tax (Burman, 2005; Castillo et al., 2019). As this tax cut affects a significant proportion of individuals, changes in demand will affect market prices and economic activity. By shifting the tax system's basis from income to consumption, the burden of taxation will be shifted from the wealthiest to the poorest. According to Apps & Rees (2018), a household's standard of living is determined by its income, but consumption must also be considered as households are presumed to be made up of the couple and their children. Comparably, raising the excise tax on certain goods and services, such as petroleum products, will raise the prices of both the taxed commodities and the commodities that use the taxed commodities as primary products in their manufacturing (Castillo et al., 2019).

One effect of the train law is an excise tax on sugar-sweetened beverages. The Philippines is one of 27 countries that have enacted a sweetened beverage levy, joining Chile, France, Mexico, Spain, and six US municipalities. This approach to slowing the rate of escalation of obesity has been endorsed by the World Health Organization and others as a cost-effective policy solution if market

prices rise enough (10–20%) to limit consumption. Cawley et al. (2019) examined the effects of beverage tax in Philadelphia and Oakland (2020) and revealed in their two consecutive studies that there is a decrease of purchase in places covered by increased beverage tax and an increase in purchases at stores with little to no beverage tax. According to the study by Saxena et al. (2018), a 13 percent excise tax on sweetened drinks in the Philippines could result in population-level health improvements. It was found that the tax would have the greatest effect on the richest quintiles. Sugar taxation has proved to be an effective tool for reducing consumption (Kaiser et al., 2016), and this tax does not seem to be a regressive tax on the poor. TRAIN law represents the Philippines' pro-poor health financing (Kaiser et al., 2016; Saxena et al., 2018). However, this is particularly crucial in low- and middle-income countries, where non-communicable diseases are on the rise. As a result, the tax burden will gradually rise (Hall, 1996; Steindel, 2001), with the bottom two income quintiles bearing roughly 30% of the tax burden. Furthermore, with the increase of excise tax as part of the new tax reform, substitution to cheaper goods or brands may have a minimal to no effect on tax income figures because the tax is fixed at a uniform rate, which means the tax is the same regardless of the net selling price (Cheng & Estrada, 2020). Since the implementation of the TRAIN law, consumers have been unable to enjoy any of their high take-home pay due to high inflation, which took a toll on their finances. According to the study of Avila and Gatpolintan (2019), due to inflation in the Philippines, escalation of household and personal spending, replacement of priorities, reduction of the quantity of consumption, involvement in part-time employment and other income-generating activities, awareness of fewer savings, and incurrence of loans and borrowings were among the adjustments in budget consumption and decisions. However, according to the empirical result of the study by Ichiue & Nishiguchi (2015), higher inflation expectations tend to result in greater current household spending. This suggestion is supported by the findings of Hausman and Wieland (2014), stating that inflation and consumer expenditure have a positive relationship.

2.4 Effect of reduced personal income tax on private savings

Tax cuts could encourage people to work, save, and invest, as stated by Gale and Samwick (2017); however, if lower taxes do not seem to be in the course of immediate spending cuts, higher budget deficits may ensue, lowering national savings and increasing interest rates. Lower tax rates increase the after-tax incentive to work, save, and invest, leading to a bonus within the size of the economy. Through substitution effects, these higher after-tax rewards induce more work effort, saving, and investment. However, although tax cuts have the ability to stimulate economic growth, they can have income implications, decreasing the need to engage in productive economic activity, and they can subsidize old resources, offering windfall benefits to asset holders while weakening new activity incentives (Ferede & Dalby, 2012; Gale & Samwick, 2017). Furthermore, tax cuts alone (i.e., without corresponding spending cuts) would normally increase the federal budget deficit. The increase in the deficit will decrease national saving, and therefore the capital stock owned and future national income, as well as raise interest rates, which will harm investments. In relation to consumption, Hall (1996) stated that the basis of an income tax's disincentive to save is the cheapening of current consumption compared to potential consumption (Weidenbaum, 1995). There is no difference between current and future consumption under taxing consumption goods. Thus, the savings opportunity is at its most effective stage (Smith, 1990).

The implications of fundamental tax reform may manifest themselves in a variety of ways, but one of the key objectives is to increase savings. The impact on saving will be measured by the extent of the existing system's tax burden on saving (Cramer & Schreur, 2013). Moreover, it will be measured by the rate of return on capital's response to changes in its after-tax return, as well as the responsiveness of saving to changes in its after-tax return. And lastly, the impact will be dependent on the allocation of tax burdens among groups with different saving proclivities, as well as any windfall gains and losses arising from the transition to the new system. The position of precautionary saving and the uncertainties that households face are important factors to consider when assessing these issues (Engen & Gale, 1997).

According to Venti and David (1987), Individual Retirement Accounts (IRAs) have been at the forefront of the controversy over tax benefits for private savings in the United States. Individuals could subtract their IRA contributions from taxable income in 1981, collect income in the account at a pre-tax rate of return, and pay tax on the entire sum when they withdrew it. In turn, the deduction allowed the government to delay the collection of taxes until later at retirement age, when they could be levied with interest. Individuals are susceptible to tax incentives in making their saving decisions, as shown by the strong growth of IRA savings following the expansion of eligibility in 1981 in the US and the equally sudden contraction following the 1986 tax reform.

Recent microeconomic studies on the effects of IRAs have come up with contradictory findings. Between 1982 and 1986, Venti and Wise (1986, 1987), together with Feenberg and Skinner (1989), claimed that IRA incentives resulted in a significant increase in private saving, while Gale and Scholz (1994) found that increasing the IRA contribution ceiling would result in a very small increase in net private saving, which would be more than offset by an increase in government dissaving. Jane Gravelle reviewed these and other studies in the Spring 1991 issue of this journal, concluding that while tax incentives for IRAs do influence how income or money, in general, is saved, they tend to have little impact on overall private savings. Throughout the decade, the availability of substantially higher rates of return on financial market assets exacerbated the improved saving rewards brought on by tax reform (Bosworth & Burtless, 1992). Furthermore, moving on to recent studies, taxation on wages does indeed have a major negative

effect on private investments (Dougan & Zhang, 2010). Because of the extent and importance of these figures, as well as the lack of any expected impact of consumption taxes on private savings, a revenue-neutral change in taxation from an income tax to a consumption tax is likely to increase private savings rates.

2.5 Tax reform on unemployment

Unemployment results in a reduction in productivity as well as personal misery for unemployed individuals. Apart from diminishing productivity, unemployment leads to increased government spending on unemployment compensation and social programs, leading to higher taxation. People's production and efficiency were lowered due to rising taxes (Pal & Rajesh, 2018). However, according to a study by Heijdra and Ligthart (2007), when employees have less than perfect bargaining power, a method of decreasing a proportional payroll tax while increasing a progressive wage tax generates a "double dividend." It lowers the equilibrium unemployment rate while also improving government income. Because of the wage tax's advanced structure, it provides an implicit employment subsidy. Lehman et al. (2014) also stated that a more progressive tax system lowers the unemployment rate while increasing employment.

Endogenous decisions about human capital are influenced by taxation (Fuest and Huber 1998), which feedback to unemployment. Compared to skill groups in labor markets with collective wage bargaining, tax policies for the highest skilled employees in competitive labor markets may work somewhat differently. High labor taxes, paired with labor market institutional rigidities, are frequently blamed for large-scale structural unemployment in OECD countries, according to Boehringer, Boeters & Feil (2004), after using an applied general equilibrium approach. Cuts in labor taxes are seen as a potentially fundamental policy approach to address the unemployment problem in this vein. On the other hand, Šarapovas & Zirgulis (2016) investigated the impact of corporation taxes on unemployment. Their analysis found that an increase in the predicted average corporation tax rate is linked to an increased unemployment rate. But, Feldmann (2011) argued that, rather than having a negative impact on unemployment, increasing the corporation tax rate would be beneficial, decreasing unemployment over time. The fundamental explanation for these surprising outcomes was that corporation taxes affected the efficiency of net profits (reducing the return on capital) and caused labor to be substituted for money.

The critical macroeconomic challenges of our day are economic growth, inflation, and unemployment. At least in the short run, inflation and unemployment are linked. Pal and Rajesh (2018) said that attempts to reduce unemployment have frequently been followed by an increase in inflation, while attempts to control inflation have typically increased unemployment, which, while transitory, is often severe.

2.6 Statement of Hypotheses

$H0_1$: The TRAIN Law has no significant impact on the consumption expenditure of income earners in the Philippines.
$H1_1$: The TRAIN Law affects the consumption expenditure of income earners in the Philippines.
$H0_2$: The TRAIN Law has no significant effect on the savings of income earners in the Philippines.
$H1_2$: The TRAIN Law influences the savings of income earners in the Philippines.
$H0_3$: The TRAIN Law has no significant effect on the unemployment of income earners in the Philippines.
$H1_3$: TRAIN Law has a significant effect on the unemployment of income earners in the Philippines.

2.7 Synthesis

This study aimed to determine the perceived effects of the TRAIN law and the growth of income on consumption, savings, and unemployment in the Philippines. This tax reform aims to create a simpler, fairer, and more efficient tax system, which will also promote investments, create jobs, and reduce poverty. In his theory of taxation, Keynes (1936) claimed that a high degree of progressive taxation is required and that low tax rates result in lower public revenue, which contributes to economic instability.

3. Research Method

As the title suggests, this chapter covers the study's methodology. The researchers thoroughly examined the research procedure, data collection methods, sample selection, and data analysis mode.

3.1 Research Design

The aim of this study is to determine the effects of the TRAIN law and the increase in income on the consumption, savings, and unemployment of different income groups. The researchers intend to use a quantitative approach to meet the study's objectives since it is a common method of conducting research that is structured to obtain and process numerical data that will be used to examine the relationship between variables. In addition, the researchers will be collecting data mainly from the World Bank Database, Philippine Statistics Authority (PSA), and National Economic and Development Authority (NEDA) and use regression analysis to quantify the perceived effects of TRAIN law on the consumption, savings, and unemployment of income earners. Given that the variables to be obtained are annual data, using regression analysis, this further tailors the method to the data the thesis

will use. Regression analysis can provide an understanding of the underlying process and the pattern of changes and effects over time; it can also evaluate the impacts of the direct or indirect intervention on the taxes of income groups.

3.2 Subjects

This paper intends to measure the relationship of the TRAIN law and income with consumption, savings, and unemployment rate in the Philippines and possibly examine if the said tax reform has a negative or positive impact on taxpayers or income earners using the data from 1991 to 2020.

3.3 Study Site

This is a national study that will only be performed and carried out in the Philippines. According to data collected from the World Bank Database and various organizations in the Philippines like Philippine Statistics Authority (PSA) and the National Economic and Development Authority (NEDA), the study will only test data collected from 1991 to 2020.

3.4 Instrumentation/Data Measure

The study will analyze the relationship between the TRAIN law, and the growth of income, and the dependent variables mainly: consumption, savings, unemployment rate. The data used are taken from the country's independent variables when the TRAIN Law took effect. As such, secondary data is used taken from the Philippine Statistics Authority (PSA), National Economic and Development Authority (NEDA), and possibly the World Bank Database.

In addition to that, the research will utilize software such as Microsoft Excel and eViews to compare and validate the data gathered from multiple sources. From the same software, several tests will be conducted to answer questions based on the research topic.

3.5 Data Collection Procedure

This study will need data on consumption, savings, and unemployment before and after the implementation of TRAIN law which is in the year 1991, and the latest data in 2020. The paper would source its data from online databases such as the Philippine Statistics Authority, abbreviated as PSA, and World Bank Database. This is a national study that will only be performed and carried out in the Philippines. They are in charge of gathering, collecting, analyzing, and publishing statistical data on the Philippines' economic, social, demographic, political, and general affairs, as well as enforcing the country's civil registration functions. The gathering of data will be done via thorough research on the internet due to safety protocols brought about by the pandemic. Acquiring accurate information and data will be followed for the validity of the research.

3.6 Data Analysis

The researchers intend to quantify and analyze the relationships between the independent and dependent variables using the regression analysis statistical approach. Regression analysis is performed to determine the relationship between variables, to make sense out of that relationship, and to provide predictive data based on the relationship that was established (Uyanik & Güler, 2013).

The purpose of this paper is to look at the relationship between the independent variables, TRAIN law, growth rate of income, and the dependent variables, consumption, savings, and unemployment. This is to examine the possible negative or positive impact of Tax Reform for Acceleration and Inclusion (TRAIN) law on the consumption, savings, and unemployment of various income groups. The regression analysis approach is a technique for calculating the association between the indicated variables and measurements using a dummy variable. The econometric models of this paper are hereby presented as:

$$d(Consumption) = \beta_0 + \beta_1(d(Income)) + D_1 + \varepsilon$$

$$d(ln(Savings)) = \beta_0 + \beta_1(d(Income)) + D_1 + \varepsilon$$

$$d(Unemployment) = \beta_0 + \beta_1(d(Income)) + D_1 + \varepsilon$$

The response variable *Y* denotes Consumption, Savings, and Unemployment. β_0 represents the intercept, which refers to the value of Y when X is equal to 0. $\beta_1(d(Income))$ stands for the regression coefficient, which in this case is the value of income measured by the first difference of income; meanwhile, $\beta_1(d(Income))$ is the regression coefficient in which the value of income is measured by first difference log of income, D_1 denotes the dummy variable of the TRAIN law. The shift in variable Y when the variable X changes by one unit is represented by these regression coefficients. Lastly, ε denotes the error expression.

This statistical strategy is used to examine a wide range of data in order to estimate the connection and direction in which a dependent variable will change as a result of changes in the independent variables (Barnes, 1998). This approach supports in determining the degree of dependence of the variables and how the independent variables influence the dependent variable,

which is the topic of interest; it also generates a regression equation that depicts the relationships between the variables (Allen, 1997). The *eViews* software will be used to analyze whether the independent variables can significantly impact the dependent variables. The signs of the parameters in the model are all negative, following the hypotheses of this thesis that states that (1) the TRAIN Law positively impacts personal consumption of income earners in the Philippines (2) the TRAIN Law has control on the savings of income earners in the Philippines (3) the TRAIN Law has an influence on the unemployment rate in the Philippines.

3.7 Regression Diagnostic Tests

When planning to work with time-series data, among the essential topics to understand is *stationarity*. The properties of a stationary series–mean, variance, and covariance–do not change over time. Among the most widely used statistical tests is the Dickey-Fuller test. It is used to evaluate whether or not a series has a unit root and thus whether or not the series is stationary. Additionally, the Variance Inflation Factor, which estimates how much the variance of a coefficient is *multicollinearity* inflated, detects multicollinearity as the correlation between two independent variables. If a set of numbers has a pattern where the values can be predicted based on the past values in the series, the series is shown to have autocorrelation. Breusch-Godfrey test is used to test serial correlation to detect *autocorrelation* of a variable and its lagged version. Hence it measures the relationship of past values to their current values.

The presumption of *normality* is that the underlying residuals are normally distributed, or nearly so. In contrast to the alternative hypothesis that the residuals are not usually distributed, the null hypothesis states that they are. The null hypothesis can be rejected and assume that the residuals are not from a normal distribution if the test p-value is less than the predetermined significance level. The null hypothesis cannot be rejected if the p-value is greater than the predefined significance level. Moreover, a *specification error* in a statistical model means, on average, one of the model's key features or assumptions is incorrect. As a result, the model's estimation may produce incorrect or misleading results. The Ramsey Regression Equation Specification Error Test (RESET) is a specification test for the linear regression model. It will be used to test whether nonlinear combinations of the independent variables can aid in the explanation of the dependent variables.

One of the assumptions made about residuals/errors in OLS regression is that the variance of the errors is the same but unknown. This is referred to as homoskedasticity or constant variance. When this assumption is violated, the problem is referred to as *heteroskedasticity*. Trevor Breusch and Adrian Pagan developed the *Breusch Pagan Test* in 1979. It is used in a linear regression model to test for heteroskedasticity and assumes that the error terms are normally distributed. It determines whether the variance of a regression's errors is affected by the values of the independent variables. The *White test* for heteroskedasticity is another test used that allows making the heteroskedasticity procedure a function of one or more of the independent variables. It's comparable to the Breusch-Pagan test, but the White test allows for a nonlinear and interactive influence of the independent variable on the error variance. Lastly, a *cointegration test* is used to determine whether there is a long-term correlation between most time series. Cointegration tests describe scenarios in which two or more non-stationary time series are integrated together in such a way that they cannot deviate from equilibrium over time. The tests are used to determine the sensitivity of two variables to the same average price over a given time period.

4. Results and Discussion

This paper examined the impact of TRAIN Law and the increase in income on households and government consumption expenditure. Additionally, the authors also determined how the new tax reform and increase in income influence the savings of income earners. Lastly, this paper evaluated how the unemployment rate is affected by the implementation of TRAIN Law and the rise in income that is expected to have a positive relationship with employment.

This research study used Final Consumption Expenditure (current LCU), Gross Domestic Savings (current LCU), and Unemployment Rate as the dependent variables to measure consumption, savings, and unemployment. Meanwhile, the two independent variables: income and TRAIN Law, used Gross Domestic Income (constant LCU) and a dummy variable measured by 0 and 1, as quantifiers respectively. The data were gathered from The World bank organization, and the period covers from 1991 up until 2020.

4.1 Consumption

Regression equation for Consumption:

$$d(Consumption) = \beta_0 + \beta_1(d(Income)) + D_1 + \varepsilon$$

Variables	**OLS Coefficient**	**OLS Probability**
C	1.45e+11	0.0053
Income	0.746260	0.0000
D1	6.22e+11	0.0000

Table 4.1 Consumption regression results

The results in Table 4.1 show the regression result of Consumption, as variables were all first differenced, the income (d(Income)) with a p-value of 0.00 exhibits a significant, positive relationship to consumption (d(Consumption)) at a 0.01 level of significance. This suggests that a 1 unit increase in income increases consumption by 0.7463 units, or if the income increases by 1,000,000 Pesos (PHP), the consumption expenditure increases by PHP 75,000,000. A significant, positive relationship exists between the dependent variable and TRAIN Law measured as the dummy variable (D1) with a p-value of 0.00 at a 0.01 level of significance. This suggests with an additional year of TRAIN Law, consumption increases by 6.22 units or consumption rise by PHP 622,000,000,000. With a zero (0) F-statistic value, the model was found to be significant at a 5% significance level.

Diagnostic Tests	*Results*	*Interpretation*
ADF Unit Root Test	All p-values < 0.05	No presence of unit root
VIF Multicollinearity Test	All values < 5	No presence of multicollinearity
Serial Correlation Test	P-value is > 0.05	No presence of serial correlation
Normality of Residual	P-value is > 0.05	Residuals are normally distributed
Specification of Error	P-value is > 0.05	No presence of misspecification
Heteroskedasticity - Breusch-Pagan-Godfrey Test	P-value is > 0.05	No presence of heteroskedasticity
Heteroskedasticity - White Test	P-value is > 0.05	No presence of heteroskedasticity
Cointegration	P-values are < 0.05	Two cointegrating equations

Table 4.2 Consumption regression diagnostic results

Table 4.2 shows the Augmented Dickey-Fuller test used by the authors for determining stationarity. The variables consumption and income in their second difference have probabilities less than 0.01, indicating that they are both stationary. This suggests that we can reject the null hypothesis that all series have a unit root, finding that the statistical properties of the time series do not vary over time. The values for Uncentered Variance Inflation factors for variables Income and D1 are less than 5, and this suggests that no multicollinearity is present in the model. The serial correlation LM test shows the presence of autocorrelation in the residuals. As depicted in Table 4.2, the probability value is at 0.69, which is greater than 0.05, and the p-value of the F-statistic is at 38%, meaning that there is no autocorrelation existing in the residuals. Additionally, with a probability of 0.101 that is greater than the predetermined significance level of 0.05, we accept the null hypothesis for the normality of residual diagnostic, which proves that the residuals are normally distributed in this model. The p-value for F-stat is 24.9%, and the p-value for the FITTED2 or squared of the added fitted values is 0.2499. As a result, we fail to reject the Ramsey RESET test null hypothesis of correct specification at the 5% significance level. This shows that the functional form is correct and that our model is free of missing variables. The Breusch-Pagan-Godfrey is one of the tests used in checking for the strong presence of heteroskedasticity in the model. The probability value is at 0.975 or 98%, and this suggests that the null hypothesis is accepted. Another test used to check the presence of

Heteroskedasticity is the White test. Based on Table 4.1, the probability value is 0.94 or 94%, and this means that we accept the null hypothesis that the residuals are homoskedastic. Lastly, with p-values less than or equal to 0.05, the results of the Johansen Cointegration test suggest that there are two cointegrating equations or a deterministic trend is present at any number of equations.

4.1.1 Income and consumption

As previously stated, the value of d(Consumption) is a function of d(Income) or the first difference of Income which shows a significant direct relationship. Based on income effects, those that have more disposable income as a result of tax reductions will presumably have a higher demand for certain items. This supports the existing consumption schedule wherein when income rises, disposable income increases, and thus consumers buy more goods and services. Similarly, according to Parker's (1999) analysis, a one-dollar rise in projected income increases nondurable consumption by around 20 cents. However, Keynes (1936) claims that individuals tend to increase consumption as their income grows, although to a lesser extent. According to Diacon and Maha (2015), this basic psychological rule implies that as the degree of income rises, so does the gap between income and consumption.

4.1.2 TRAIN Law and consumption

Similarly, a significant, positive relationship also exists between the TRAIN Law and consumption. This suggests that with the implementation of the TRAIN Law, Consumption expenditure increases as most taxpayers' take-home pay significantly improved as a result of the TRAIN policy's lowered personal income tax. This is especially true for low and middle-income earners. However, those with a low and middle income are now burdened by an increase in the excise tax and the cost of essential products (Burns & reside, 2016; Pregoner et al., 2020). This particular tax reform reduces personal income tax, allowing more take-home pay; however, these tax cuts indirectly shifted to consumption tax as adjustments were made through the excise tax. With this adjustment, the price for commodities increased, thus the inflation and increase in consumption expenditure. This supports the claim by Castillo et al. (2019), stating that raising the excise tax on certain goods and services, such as petroleum products, will raise the prices of both the taxed commodities and the commodities that use the taxed commodities as primary products in their manufacturing. Thus, this positive relationship between TRAIN law and consumption opposes the claims by Avila and Gatpolintan (2019), who stated that due to inflation in the Philippines, reduction of the quantity of consumption is one of the adjustments in budget consumption and decisions of Filipinos. On the contrary, Hausman and Wieldan's (2014) study findings suggest that inflation and consumer expenditure have a significant positive relationship.

4.2 Growth rate of savings

Regression equation for growth rate of savings:

$$d(ln(Savings)) = \beta_0 + \beta_1(d(ln(Income)) + D_1 + \varepsilon$$

Variables	**OLS Coefficient**	**OLS Probability**
C	-0.030650	0.2865
Income	2.830138	0.0000
D1	-0.130325	0.0004

Table 4.3 The growth rate of savings regression results

Based on the regression result as presented in Table 4.3, as variables were all first differenced, log of income (d(ln(Income))) and log of savings (d(ln(Savings))) show a significant, positive relationship with a p-value less than 0.01 level of significance. This suggests that if income (d(ln(Income))) increases by 1%, savings (d(ln(Savings))) increases by 2.8301%, or if income increases by 1,000,000 Pesos (PHP), the savings increase by PHP 283,000,000. Meanwhile, with a p-value of 0.0004, a significant, negative relationship exists between the TRAIN Law measured as the dummy variable (D1) and the dependent variable savings (d(ln(Savings))). This suggests that with the implementation of TRAIN Law, (d(ln(Savings))) decreases by -0.130 units or savings decreases by PHP 13,097,112.42. The model was proven significant at a 5% significance level with its zero (0) F-statistic value.

Diagnostic Tests	*Results*	*Interpretation*
ADF Unit Root Test	All p-values < 0.05	No presence of unit root
VIF Multicollinearity Test	All values < 5	No presence of multicollinearity
Serial Correlation Test	P-value is > 0.05	No presence of serial correlation
Normality of Residual	P-value is > 0.05	Residuals are normally distributed
Specification of Error	P-value is > 0.05	No presence of misspecification
Heteroskedasticity - Breusch-Pagan-Godfrey Test	P-value is > 0.05	No presence of heteroskedasticity
Heteroskedasticity - White Test	P-value is > 0.05	No presence of heteroskedasticity
Cointegration	P-value is > 0.05	No cointegrating equation

Table 4.4 Growth rate of savings regression diagnostic results

The result in Table 4.4 shows the Augmented Dickey-Fuller test used by the authors for determining stationarity. The time series of both variables, namely log of savings and log of income, and are both stationary at their second differences, having probabilities that are less than 0.01. Therefore, we can reject the null hypothesis that all series have a unit root, concluding that the time series' statistical properties do not change over time. Additionally, Table 4.4 indicates the values for Uncentered Variance Inflation factors for variables Income and D1 are less than 5; therefore, we reject the null hypothesis that there exists multicollinearity detected in the model. To determine if there is an existing correlation in the model, the authors used Breusch-Godfrey serial correlation LM test. Based on the table above, the probability value is at 0.42, which is greater than 0.05, and the p-value of the F-statistic is 90% which gives evidence that there exists no serial correlation in the residuals of the mean equation. Therefore, we accept the null hypothesis for the serial correlation LM test up to 2 lags. Moreover, with a probability of 0.49 that is greater than the predetermined 0.05 (5%) significance level, we accept the null hypothesis for the normality of residual diagnostic, which proves that the residuals are normally distributed in this model. In testing for misspecification in the regression model of savings using Ramsey RESET, the p-value of F-statistics is 22%, which means we fail to reject the null hypothesis of the correct specification. This indicates that the functional form is correct, and our model does not suffer from omitted variables and shows no nonlinearities or misspecification in the data. The Breusch-Pagan-Godfrey is one of the tests used in checking for the presence of heteroskedasticity in the model. The probability value is at 0.79 or 80%, and this suggests that the null hypothesis is accepted. Another test used to check the presence of heteroskedasticity is the White test. The probability value is 0.81 or 81%, and this means that we accept the null hypothesis that the residuals are homoskedastic. Lastly, with p-values greater than and not equal to 0.05, the results of the Johansen Cointegration test suggest that there is no cointegration or no deterministic trend is present at any number of equations.

4.2.1 The growth rate of income and savings

According to the result of the second regression model the value of both first differenced variables, (d(ln(Savings))) and (d(ln(Income))) display a significant relationship. Domestic savings increase because of an increase in income, which in turn increases economic growth. Alguacil, Cuadros, and Orts (2004) reinforce this result by arguing that larger savings lead to faster economic growth in Solow's model. Savings leads to more efficient use of scarce resources, increased national output, income, and employment, and thus solve inflation, unemployment, and balance of payment problems, poverty, and inequality; and it frees the economy from the burden of foreign debt, resulting in a better state of welfare. In 1956, Solow emphasized the significance of saving for economic growth, stating that higher savings lead to higher investments and production.

4.2.2 TRAIN Law and growth rate of savings

One of the key objectives of tax reform is to increase savings. Cramer and Schreur (2013) suggested that the magnitude of the present system's tax burden on saving will be used to measure the influence on saving. According to Gale and Samwick (2017), tax cuts could encourage people to save. Moreover, in their analysis, Engen and Gale (1997) stated that precautionary saving is an essential factor considering the uncertainties that households encounter.

TRAIN Law aims to reduce tax rates like income tax, which, therefore, indicate better take-home income for workers. In relation to consumption, having more disposable money as a result of the tax reduction will likely have a higher demand for particular commodities. Weidenbaum (1995) and Hall (1996) similarly stated that the basis of an income tax's disincentive to save is the

cheapening of current consumption compared to potential consumers. This can support the results of the regression findings in this paper where a negative relationship exists between the Train Law and savings. It can be deduced from this result that additional income gained by households from the tax reform is mostly spent rather than saved. Furthermore, there was a relative increase in prices for commodities under the implementation of the TRAIN Law. This can also be one of the multitudes of reasons for the significant negative relationship between the said tax reform and savings. However, Smith (1990) argued that there is no difference between current and future consumption of taxing goods and that the savings opportunity is at its most effective stage.

4.3 Unemployment

Regression equation for Unemployment:

$$d(Unemployment) = \beta_0 + \beta_1(d(Income)) + D_1 + \varepsilon$$

Variables	**OLS Coefficient**	**OLS Probability**
C	0.001577	0.0000
Income	-4.23e-15	0.0000
D1	0.001298	0.0071

Table 4.5 Unemployment regression results

As presented in Table 4.5, the regression results for unemployment, as variables were all first differenced, showed that income (d(Income)) with a p-value of 0.00 does influence the unemployment rate (d(Unemployment)) in the country with a 0.01 level of significance. With their significant, negative relationship, a 1 unit increase in income (d(Income)) leads to a 4.23e-15 decrease in unemployment. Meanwhile, the dummy variable (D1) or TRAIN Law and (d(Unemployment)) exhibit a positive relationship at a p-value of 0.0071. As D1 increases by one unit, d(unemployment) will increase by 0.0013 units. One year of TRAIN Law will increase unemployment by 0.13%. With a zero (0) F-statistic value, the model was found to be significant at a 5% significance level.

Diagnostic Tests	*Results*	*Interpretation*
ADF Unit Root Test	All p-values < 0.05	No presence of unit root
VIF Multicollinearity Test	All values < 5	No presence of multicollinearity
Serial Correlation Test	P-value is > 0.05	No presence of serial correlation
Normality of Residual	P-value is > 0.05	Residuals are normally distributed
Specification of Error	P-value is > 0.05	No presence of misspecification
Heteroskedasticity - Breusch-Pagan-Godfrey Test	P-value is > 0.05	No presence of heteroskedasticity
Heteroskedasticity - White Test	P-value is > 0.05	No presence of heteroskedasticity
Cointegration	P-values are < 0.05	Two cointegrating equation

Table 4.6 Unemployments regression diagnostic results

Using the ADF test, Table 4.6 shows that the variables unemployment and income in their first difference and second difference, respectively, have probabilities below 0.01, indicating that they are both stationary. Therefore, we conclude that the null hypothesis that all series have unit root is rejected. The values for Unentered Variance Inflation factors for variables Income (d(Income)) and TRAIN Law (D1) are less than 5; this suggests that no multicollinearity is present in the model. The Breusch-Godfrey Serial Correlation LM test shows if there is autocorrelation in the residuals. The probability value is 0.1013, which is greater than 0.05, meaning no autocorrelation exists in the residuals. Additionally, with a probability of 0.32 that is greater than the predetermined significance level of 0.05, we accept the null hypothesis for the normality of residual diagnostic, which proves that the residuals are normally distributed in this model. The p-value for F-stat is 0.2891 or 29%, and the p-value for the FITTED2 or squared of the added fitted values is 0.2891. Therefore, at a 0.05 level of significance, we accept the Ramsey RESET test null hypothesis of the

correct specification. This indicates that the functional form is correct, and our model does not suffer from omitted variables and shows no nonlinearities or misspecification in the data. The Breusch-Pagan-Godfrey is one of the tests used to check if heteroskedasticity is present in the model. The probability value is 0.5152 or 52%, indicating that the null hypothesis is accepted. Another test used to check the presence of heteroskedasticity in the model is the White test. The probability value is 0.2869 or 29%, which suggests that the null hypothesis that the residuals are homoskedastic is accepted. Furthermore, with p-values less than or equal to 0.05, the result of the Johansen Cointegration test suggests that there are 2 cointegrating equations or a deterministic trend is present at any number of equations.

4.3.1 Income and unemployment

Economists have taken the initiative to keep unemployment low. The assumption that increased unemployment creates income disparity is the fundamental basis for this concern. According to Björklund (1991), this is a realistic assumption, given that those with low earnings are more likely to be unemployed, even if they have a job. On the other hand, increases in unemployment are linked to several other economic shifts that have far-reaching implications for personal income distribution. Higher unemployment impacts the factor shares of income in addition to the income losses sustained by people who become unemployed.

According to the findings, there is a negative relationship between income and unemployment. The findings of this regression result are supported by the study of Urrutia et al. (2017), wherein income affects the movement of the unemployment rate. Any increase in income can cause the unemployment rate to ascend or descend. Similarly, the Phillips curve was suggested by economist A.W. Phillips in 1958. In his initial study, he discovered a steady, negative relationship between wages and unemployment and noticed that this relationship seems to be true in the United Kingdom and other industrial countries.

4.3.2 TRAIN Law and unemployment

Considering tax reform is crucial to a country's economy, taxes should be based on the number of expenditures, tax collection effectiveness, and tax structure. The tax reform's goals are to eliminate deadweight losses, enhance the tax system's policy to achieve equality, boost revenue collections, and lower taxpayers' transactional burden. According to Rutkowski (2007), a country that puts an excessive tax burden on labor income frequently experiences a rise in unemployment, a decline in labor participation, and an expansion in the informal sector among employees. TRAIN Law intends to simplify and improve the collection of Philippine taxes in order to promote economic and social activities such as incentivizing investments, reducing poverty and unemployment, and promoting economic progress. Despite the fact that the major purpose of the tax reform effort is to reduce taxes, although its primary goal is to raise funds for the government's large-scale infrastructure projects and social programs, it also has other appealing goals.

The findings of this paper concerning the positive relationship between unemployment and TRAIN law conforms to the study by Castillo et al. (2019). Their study determined the impact of TRAIN Law on employment by using the changes in activity levels across sectors, and according to them, as a result of the TRAIN Law, unemployment in certain industries faced an increase in economic activity. Because of the fall in economic activity in the TRAIN 1 scenario, unemployment in various industrial activities increased. Although total employment may rise, certain people may find it difficult to transfer from one job to another.

5. Conclusion and Recommendation

5.1 Conclusion

This paper aims to determine the impacts after implementing the TRAIN Law and the increase in income on consumption, savings, and the unemployment rate in the Philippines. The researchers found out that there are significant relationships present between the TRAIN Law and the rise in income in the three dependent variables.

According to some studies, taxing goods like sugar-sweetened beverages has proved to be an effective tool for reducing consumption. Based on the results of this research, TRAIN Law and income positively impact consumption expenditure. The direct significance of TRAIN Law maybe because of the increase in disposable income. This positive impact of legislative enactments is related to people's increased buying power as a result of lower personal income taxes. Thus, according to income effects, persons who have more disposable income as a consequence of tax cuts are likely to have a greater demand for certain commodities. This supports the current consumer behavior, in which as income rises, so does disposable income, and as a result, consumers buy more products and services. However, the enactment of TRAIN Law also has undesirable effects related to a stable and even worse living situation since the increase in income is countered by the increases in the prices of the goods and services, including the essential items. This has led to concerns by Filipinos, primarily those in low to middle-income earners, that the application of this tax at the same time as an increase in global oil prices contributed to the recent rise in Philippine inflation rates. Hence, the gains from the adopted Tax Reform for Acceleration and Inclusion (TRAIN) act are offset by a higher monthly expense. It can be observed that, although commodity prices were high in comparison prior to the tax reform's enactment, it has resulted in a higher current

level of consumer spending on all types of goods. Consequently, consumers consume more in anticipation of price and income shifts. Therefore, we reject the null hypothesis stating that TRAIN Law has no significant impact on the consumption of income earners in the Philippines.

The findings of this research showed that income positively affects savings, whereas TRAIN Law negatively affects savings. The country's total reserves impact indicates that households, corporations, and other institutions depleted their resources to deal with the effects of tax reform. Due to the increase in disposable income, people consume more. This is according to the theory of income effect. It states that when consumers' incomes rise, their consumption will rise as well, up to a certain level of satiation. The savings activities of various income groups have been shown to differ (Rehman et al., 2011). Even if they wanted to allocate more to savings, they couldn't because it would eventually go to commodities and necessities. Furthermore, after the implementation of the TRAIN Law, there has been a relative increase in commodity prices, which might be one of the many explanations for the significant negative relationship between the said tax reform and savings. Generally, individuals consume more when their current income rises. Additionally, small increases in spending can diminish your disposable income and, over time, undermine the value of your savings (Gale & Samwick, 2017; Terada-Hagiwara, 2009). As a result, we reject the null hypothesis stating that the TRAIN Law has no effect on the savings of income earners in the Philippines.

Supported by the findings, TRAIN Law positively impacts unemployment, while income negatively impacts the unemployment rate. As TRAIN Law is expected to raise the pricing of basic goods, non-essential products such as sugar-sweetened beverages may be removed from the consumer's market list. Companies of commodities whose taxes have been increased by the TRAIN Law, such as oil products, cigarettes, sugary beverages, and motor vehicles, would be obligated by reason and logic to increase their prices to pay the cost of the added financial burden. The increase in the price of these items is projected to lower demand, and low demand for these products may necessitate layoffs for certain businesses to pay the increased financial strain. Furthermore, Castillo et al. (2019) stated that the decreased level of economic activity in some sectors would increase unemployment as a result of the TRAIN Law's repercussions. On the contrary, the anticipated increased take-home income as a result of the tax reform draws individuals into the labor market, particularly the unemployed. This is in line with one of the government's aims, which is to generate more jobs, and as a result, the country's unemployment rate has decreased. It is imperative to emphasize, however, that this result is based exclusively on the increased income generated by the reduced personal income tax rate, not the entire TRAIN Law and according to Sarapovas & Zirgulis (2016), a rise in the expected average income or company tax rate is associated with an increase in the unemployment rate. Hence, we reject the null hypothesis that TRAIN Law has no significant effect on the unemployment rate in the Philippines.

5.2 Policy Implications

The policy implications of this research imply that while the TRAIN Law has had a considerable beneficial impact on consumption, it has had a negative impact on the growth rate of savings and unemployment in the country. It is suggested that income earners, particularly low and middle-income earners, should refrain from consuming their entire income and be encouraged to save at least some of their earned income. While consumption is good and important, saving is vital to an individual's productive wealth and is contributive to the country's economic progress. On the other hand, individuals looking for jobs under TRAIN Law should also be involved in agricultural activities or the service sector as both have a positive relationship with the said tax reform. For instance, unemployed individuals are recommended to look for jobs in agriculture like in sectors such as paddy rice, corn, and livestock or in food manufacturing to counter the growth in unemployment.

In order to improve the delivery of essential services and better future social and economic results, the government should consider modifying the TRAIN Law and introducing a tax or policy that would stimulate private savings and employment. Additionally, the government should explore and promote the practice of consumption smoothing, given that the TRAIN law is more effective on consumption and ineffectual on savings. Another approach to raise the country's savings is to boost individual retirement plans through banks or set up automated savings, such as a tax-favored retirement account through automatic paycheck deductions. Furthermore, the government may also grant employment subsidies to businesses that recruit unemployed workers. Funding companies that hire unemployed individuals can help alleviate the Philippines' unemployment problem. However, depending on the number of subsidies provided by the government, this strategy may put pressure on the government's budget.

Funding: This research received no external funding.
Conflicts of Interest: The authors declare no conflict of interest.

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