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Income Distribution and the Role of Taxation in Philippine Development: An Analysis of Two Decades

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The comparative analysis of data on income and taxes for the pre-martial law and martial law periods elicited the following trends. The average total family income increased in real terms in the pre-ML period but declined during the ML period. A large number of poor and very poor families both in terms of absolute numbers and percentages graduated to become less poor in the pre-ML period. This trend was reversed during the ML regime when the absolute number of these groups doubled. Based on Gini Coefficients, the Philippines' high inequality ratio lessened in the pre-ML but became very high in the ML period. The data also indicated a very high tax burden of the lowest income group. The Modified Gross Income Tax System was found ineffective in rectifying inequitable tax burden nor in resolving the inadequacy of tax revenues. In sum, taxation had a minimal effect on the nation's distribution patterns.

Introduction

This article tells the sad story of two decades of development in a nation now saddled with political and economic instability which in turn will have a profound effect on social development or quality of life of the poor in Filipino society. It focuses on one particular aspect of the development, i.e., income distribution among various groups in society and the impact of taxation thereon.

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Objectives of the Study

This longitudinal study attempts to quantify the shifts in total family income and the total tax burden for the various income groups. It covers the periods 1960-1972 and 1973-1980. The historical data have been analyzed to gain insight into the following issues:

1. Whether families move to higher or lower income brackets;

2. Whether society has become more egalitarian in terms of income[1] distribution;

3. Whether or not the government revenue system has become a more effective mechanism to equalize the income resources of the rich and the poor;

4. Which income groups in society carry the burden of supplying the revenue[2] for the government and whether or not this burden has shifted;

5. Whether government revenues provide sufficient resources to finance the government's programs, many of which are designed to uplift the status of the poor;

6. Whether the gross income tax system will be more or less effective in tapping the resources and wealth of the higher income groups.

The choice of periods covered is quite deliberate. The twelve-year period from 1960-1972 was characterized by economic growth both within the Philippines and internationally. During the 1960s, inflation[3] averaged, 3.2% but reached 14.8%, 21.8% and 8.2%, respectively for the first three years in the 1970s so that prices doubled during the twelve-year period. This facilitated comparisons among income classes by merely doubling the figures. For example, a family earning between ₱2000 and ₱2999 in 1960 could be compared to a family earning between ₱4000 and ₱5999 in 1972. The eight-year period, 1972-1980, was characterized by economic instability both domestically and internationally. The major cause for this instability was the threefold increase in the price of oil in 1973 and again in 1979-80. This resulted in a collapse of prices for traditional exports while imports became prohibitively expensive. As a consequence, the annual rate of inflation[4] averaged 14.0%, causing prices to increase threefold. Annual family earning between ₱2000—₱2999 in 1960 which could be compared to ₱4000—₱5999 in 1972 became comparable to a family earning between ₱12,000—₱17,999 in 1980. This period was also known as the martial law era. During this time the government instituted deficit financing wherein borrowings played a crucial role in providing the finances for development projects whenever the revenue system was unable to provide the required resources.

Because data are not readily available, the author has used and correlated data from various government sources including the Bureau of Internal Revenue (BIR), the National Census and Statistics Office (NCSO), the National Economic and Development Authority (NEDA) and others. The methodology used is briefly outlined in this paper; the details of calculations, assumptions and evaluation of the accuracy of data are contained in the Appendices.

The Concept of Income Distribution and National Development

National development refers to changes over time toward a better quality of life. Academicians frequently denote economic, social and political developments as components thereof. While this definition encourages a systematic study, the dimensions are inseparable, interrelated and overlapping. Todaro[5] integrates these components into the following definition:

> *Development is the process of improving the quality of all human lives. Three equally important aspects of development are: (1) raising people's living levels — i.e., their incomes and consumption levels of food, medical services, education, etc.—through 'relevant' economic growth processes, (2) creating conditions conducive to the growth of people's self-esteem through the establishment of social, political and economic systems and institutions which promote human dignity and respect, and (3) increasing people's freedom to choose by enlarging the range of their choice variables — e.g., increasing varieties of consumer goods and services. This definition describes a process over time. Inherent within the concept of self-esteem is maintaining the dual society, i.e., the co-existence of extreme poor and the affluent within reasonable levels.*

In this paper, a narrow but important slice of the development concept is examined, that is, the extent to which the income levels of families has changed over time and the effect of taxation thereon. This paper also examines the extent to which Filipino society has become more or less dualistic. The underlying reason for this choice is the concept that one of the ways to improve the quality of life of the lower income groups which constitute the majority of Filipino society is to enable them to increase their consumption of such basic necessities as food, medical services, education. Access to these basic needs requires increases in income which in turn allow the social aspects of development to take place. Also, maintaining dualism within reasonable levels is a necessary condition before the fruits of economic growth can be distributed fairly to all income groups. This in turn fosters the growth of people's self-esteem and the attainment of social goals.

The Concept of Tax Burden

Taxation is a fiscal instrument that can be used to achieve a number of objectives including the redistribution of wealth by taking income away

from the more affluent groups in the society. This is realized whenever the incidence of taxation or the ultimate resting place of the money burden of tax is with those more affluent groups. When this occurs the tax system is said to be progressive. The desirability of having this kind of a tax system comes from one of the enduring theories of taxation by Adam Smith which are deemed relevant to the design of a development-oriented tax system. Smith prescribes the following four principles known as the canons of taxation, namely: equity, certainty, convenience and economy. The principle of equity prescribes that taxes must be based on the taxpayer's ability to pay as measured by the size of his income. Equitable taxation is important for societies where income and wealth are unevenly distributed.[6] The equity principle is enshrined in the 1973 Philippine Constitution, Article 8, Sec. 17 (1) which states that:

> *The rule of taxation shall be uniform and equitable. The Batasan Pambansa shall evolve a progressive system of taxation.*

Adherence to the principles of taxation means that families would pay progressively more taxes when they belong to the higher total family income ranges. This can be measured in the absolute amount of taxes that each income range contributes to the total government revenue. A more meaningful statistics would be the burden of taxes of each income range which means the percentage of income that each income group pays in taxes. Any contribution in taxes by the lowest income group, also referred to in this paper as the very poor group, involves a real hardship and deprivation of essential and basic necessities such as food. On the other hand, the second highest income group (1980 Income Groups range ₱30,000-₱59,999 per annum) which constitutes the middle class and the highest income group (1980 Income Group range greater than ₱60,000 per annum) which comprises the upper class or the rich would be expected to contribute the bulk of the tax revenue both in terms of absolute amounts as well as in terms of their tax burden. Expressed in another way, consider the following aggregate statistics. In 1980, over 40% of the Filipino families had a total income of less than ₱6000 per annum which, in aggregate, totalled less than 8% of the collective family income of all Filipinos. On the other end of the income scale, 8.4% of the families earned over ₱30,000 per annum or over 35% of the aggregate total family income.[7] Clearly, the higher income groups have a greater capacity to pay the country's taxes than the poor for which paying additional taxes would mean increased hunger and misery.

The Philippine Revenue Structure

The Philippine revenue system consists of a multitude of taxes, licenses and fees. These are categorized as direct taxes which are a tax on income and property and indirect taxes which are initially paid by the manufacturer, retailer, and so on before they are shifted to the person who finally carries

the burden. Examples of direct taxes include personal and corporate income taxes and taxes on individuals for real estate, vehicles and social security contributions. Examples of indirect taxes include taxes on commodities, sales and importation duties.

Direct taxes such as personal and corporate income taxes and transfer taxes are the most progressive types of taxes. Indirect taxes such as sales tax, or importation duties, on the other hand, have a tendency to burden the lower-income classes. This is because the burden is shifted from the persons paying the tax to the consumer of goods and services. Therefore, the mix of tax instruments is critical when deciding which income class carries the bulk of the tax burden.

The last comprehensive study that determined and analyzed the tax burden by income class was done by the Joint Legislative-Executive Commission in 1964 using 1960 data.[8] This work is hereafter referred to as the 1960 Study. At that time, revenues amounted to ₱1.4 Billion as compared to ₱33.3 Billion in 1980. Tax revenues had thus increased 23.6 times or 4.0 times in real or inflation-adjusted terms.[9] This was achieved by increasing the real tax burden per family 1.64 times.

Research Methodology

This paper determined the tax revenue that each income group contributed both in absolute amounts and relative to other income groups in 1972 and in 1980 and compared it with data from the 1960 Study. It also determined the resulting tax burden per income group and compared it with the 1960 data. The total tax revenue for all income groups can increase or decrease because of changes in the economy or in revenue legislation. How such increases or decreases in total tax revenues are distributed among the various income classes depends on the mix of tax instruments. For example, a shift from indirect forms of taxation to more direct forms would increase the tax burden for the higher-income class groups. These changes in the mix of tax instruments are available from aggregate tax data which list the amount of money collected from each type of tax. The relative distribution of taxation among income groups can also change because of alterations in the consumption patterns of the people. For example, if the lower and middle income classes will stop purchasing imported goods, then importation duties and therefore tax revenue would become more progressive. Data on the alterations in consumer patterns are not available and would require a survey of households similar to the one conducted for the 1960 Study and explained later in this paper.

This paper examined only the changes in the relative distribution among income groups resulting from shifts in the mix of taxes used. The

changes of the tax burden among the various income groups resulting from changes in consumer patterns have been held constant because:

1. A survey of households is beyond the scope of this paper.

2. It is unlikely that the expenditure patterns of the lower and middle income groups have altered significantly since a major portion of family income in 1980 as in 1960 must go to food, housing and clothing.

3. The allocation of the various types of revenues among the income categories of the 1960 study appears logical and still applicable to the present.

The data in this study were arrived at as follows:

1. The 1960 Study was reviewed in terms of the methodology used, the apparent accuracy of its data and its applicability today.

2. Data on total family income and on government revenue were obtained and classified using the same categories as the 1960 Study.

3. The various types of tax revenues collected in 1972 and 1980 were apportioned among family income classes. This was according to the total income for each class and the allocation used in the 1960 study, based on the increases in total family income and assuming there was an identical tax burden compared to 1960. Any remainder or shortage was allocated among the family income classes proportionately according to the first allocation.

4. The allocation of the various categories of taxes for each family income class was summed up to give the total tax revenue per family income class.

5. Total tax revenue per income class was correlated with total family income class for analysis.

6. The correlated data were used to plot Lorenz curves and the corresponding Gini coefficients were calculated therefrom.

These mathematical calculations were computerized into a futuristic model that projects the effect on the total tax burden by income class if the various categories of taxes are increased or decreased by different amounts. For example, if the government decided to cover the current deficit of over ₱10 Billion through increasing property taxes, then the model would show the resulting tax burden by income class.

Characteristics of Taxation in 1960

The characteristics of the tax system were explored in the 1960 Study. This study determined the total amount that each family income class group contributed to total revenues. It did this by first studying family consumption patterns through a survey of 6,956 families and combining that with the theories of tax shifting. This provided information as to which group the final incidence of taxation or its ultimate resting place was laid upon.

The conclusions of the 1960 study were:

1. The significant inequalities in the distribution of income were hardly altered by the incidence of taxation. The lowest 20% income group received 3.7% of total family income while the lowest 50% and 90% received 17.0% and 57.6%, respectively. The highest 10% income group, therefore, enjoyed 42.4% of the total family income. The resulting Gini coefficient was .5260. These percentages for the four groups changed to 3.6%, 16.9% and 58.8%, respectively after taxation (Gini coefficient became .5100).[10]

2. Government revenues amounted to ₱1.4 Billion. This amount was adequate to cover government expenditures.

3. Compared to total family income, the overall tax burden averaged 20.2%. Stated differently, it means that for each peso earned twenty centavos were paid in taxes.

4. Families earning less than ₱500 per annum in either money or in kind represented 25.4% of all families, yet this group carried a tax burden proportionate to total family income that was substantially greater than all other income groups except the 1.1% of families earning over ₱10,000. Around 31.0% of the families earned between ₱500 and ₱999 per annum.

5. The tax burden showed an erratic regressive trend. For most family income groups, however, it ranged from 16.9% to 18.7% but with the following exceptions:

   a. The upper middle class income group earning between ₱5000 and ₱9999 had a below average burden of only 15.0%.

   b. The lowest income group earning below ₱500 had an effecitve burden of 23.0%.

   c. The highest income group earning ₱10000 or over had an effective burden of 33.5%.

6. Indirect and direct taxes accounted 72.5% and 27.5% of all taxes, respectively. The proportion of direct taxes was considered low compared

to other countries in relatively the same stage of development as the Philippines. For example, Burma had 30.9%, Mexico 36.9% and Indonesia 42.3%. It was also low compared to developed countries like the United States, Canada, Sweden and Japan which ranged from 61.3% to 69.7%.

7. The effective rate of taxation broken down into direct and indirect taxes for the income classes below ₱500 and above ₱10000 was as follows:

Table 1. Direct and Indirect Tax Burden for Family Income Below ₱500 and above ₱10,000

	Family Income <₱500			*Family Income* >₱10,000		
	Total paid by Class	%	Component of Tax Burden	Total Paid by Class	%	Component of Tax Burden
Direct Taxes	₱ 7,487	7.7	1.8%	₱222,108	63.5	21.3%
Indirect taxes	₱89,715	92.3	21.2%	₱127,595	36.5	12.5%
Total	₱97,202	100.0	23.0%	₱349,703	100.0	33.5%

Source: 1960 Study; See also Appendix A, Tables IV and V.

8. The distribution impact of taxation resulted in reducing the total share of family income for the highest 10% income group by 1.2% and from the lowest 20% income group by .1%. This 1.3% was distributed to the 50%-90% income group. These data are summarized in Table 2 and in the Lorenz curve contained in Figure 2.

Table 2. 1960 Distributive Impact of Taxation

	Percentage of Income Distribution						
Income Group	*Before all Taxes*	*After all Taxes*	*Distributive effect*	*After Direct Taxes*	*Distributive effect*	*After Indirect*	*Distributive effect*
⟩20%	3.7	3.6	—.1	3.9	+ .2	3.5	—.2
20% — 50%	13.3	13.3	0	13.8	+ .5	12.8	—.5
50% — 90%	40.6	41.9	+1.3	41.9	+1.3	40.6	.0
⟩10%	42.4	41.2	—1.2	40.4	—2.0	43.1	+ .7

Source: 1960 Study; See also Appendix A, Table VII-a.

The foregoing table also shows the distributive impact of direct and indirect taxes. Direct taxes distributed 2% of the income of the upper 10% to households of other categories especially the 50%-90% income group.

Indirect taxes had a distributive impact in the opposite direction and .7% of total family income was distributed from the lowest 50% income group to the upper 10% income group.

The 1960 Study recommended a re-examination of the ratio of direct and indirect taxes to total tax collected. Increasing the proportion of direct taxes would enhance the principles of equity and ability to pay. The study warned, however, that tax reforms should be cautious and take into account existing social, economic and institutional factors.

This longitudinal study in accordance with its objectives already stated will examine the characteristics of the tax system at the end of 1972 and 1980 and compare them to the 1960 conclusions. Trends can then be analyzed to find out whether the revenue system has become a more effective instrument to achieve equity and thereby able to improve the lot of the nation's poor.

Development During the Period 1960-1972

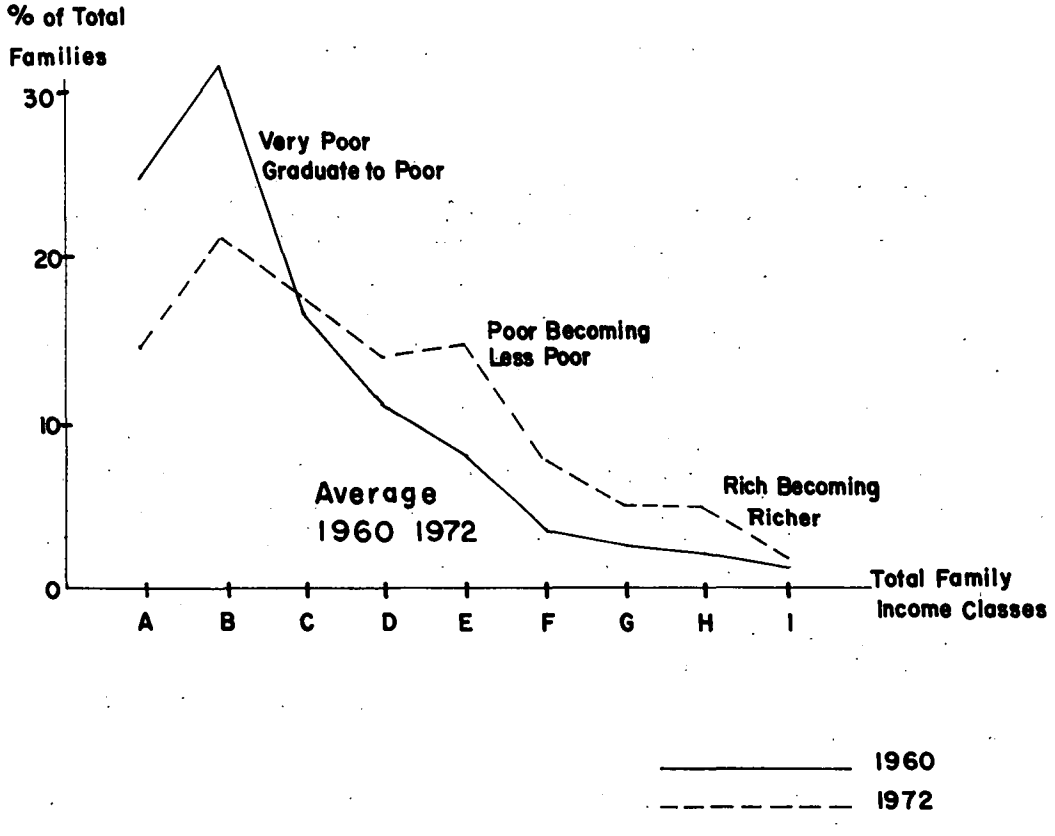
Family Income

The number of families belonging to various income groups can be plotted on a graph as illustrated in Figure 1 for 1960 and 1972. The shape of the curve around the average family income is reflective of the type of income distribution that exists in the country. For example, in a perfect social state all families with the same number of members would enjoy the same income and the graph would be one point. In semi-social states like Sweden, average family income would cluster around the average income in approximately a bell curve with a high peak. In capitalistic states, the curve would tend to be skewed to the right and its dispersion around the center would increase. In a dual society, the curve of family income would be skewed badly to the right. Old theories of development equated increases in the average size of family income to positive development regardless of who the beneficiaries were of such increases. Theories in the mid-1960's and beyond, in addition, considered the shape of the curve. Positive development was seen as taking place if the curve became more normal and clustered around the average, i.e., when the gap between the rich and the poor narrowed and, thus, increases in average income would be shared by all income groups.

Figure 1 shows that in 1960 the curve was very badly skewed to the right indicating the extent of dualism in Philippine society which consists of the multitudes of poor and very poor and a few rich people. In 1960, average income was ₱1474 per annum or ₱2963 in constant 1972 pesos. However, 71.7% of the households earned less than that amount. In 1972, the curve, while still badly skewed to the right, became more normal and

centered around the average income of ₱4184 per annum. This amount of ₱4184 was 41% higher in real terms than in 1960. In 1972, 68.3% of the households earned less than the average family income. This was an improvement of 3.4 percentage points toward the ideal of 50%. In other words, the curve came closer to approximating the bell curve. This collaborates with Figure 1 which shows that the number of families in the lowest income group and earning less than ₱1000 per annum in 1972 (₱500 in 1960) dropped from 25.4% to 14.4% of all households. For the penultimate lowest income group earning between ₱1000 to P1999 per annum in 1972 (₱500 to ₱999 in 1960), this figure dropped from 31.0% to 21.5%.[12]

Figure 1. Shifts in Distribution of Income Classes from 1960 to 1972

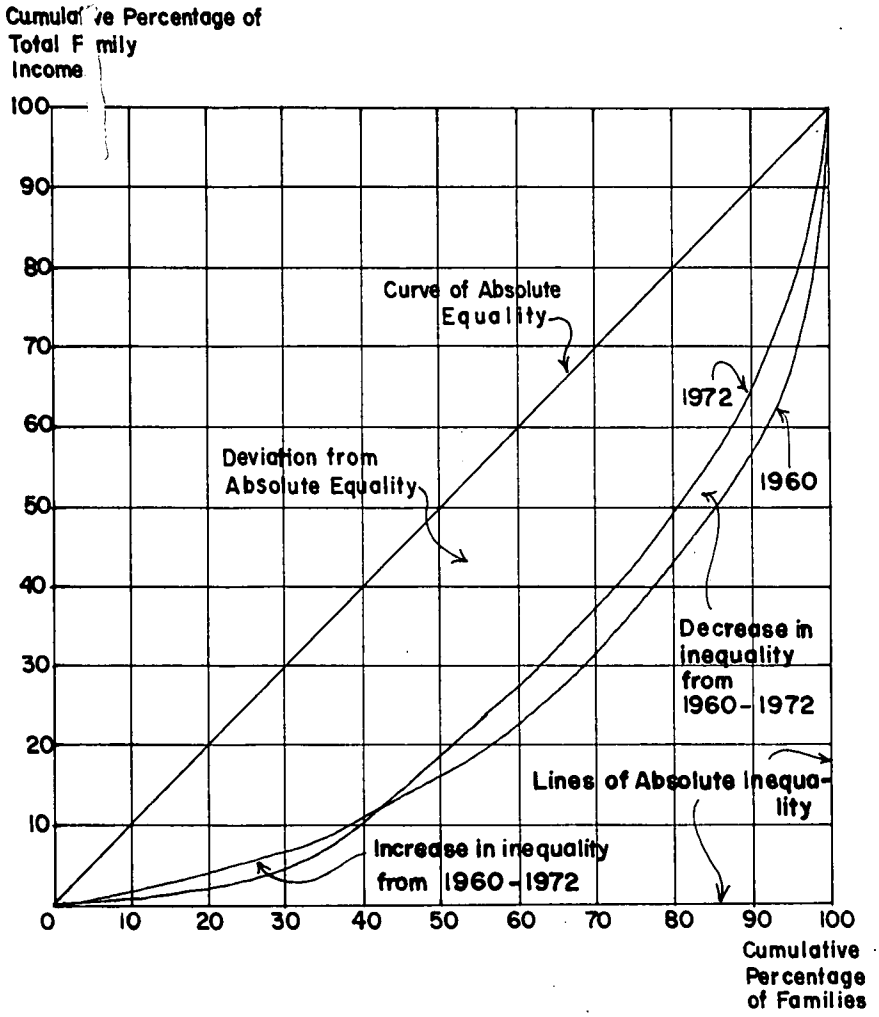


Note: Total Family Income Classes A to I inclusive are defined in Appendix A, Table VIII.

Source: Appendix A, Tables I and II.

Distribution of income is normally presented using the Lorenz curve which plots the cumulative percentage of families on the horizontal axis and the cumulative percentage of family income on the vertical axis. In this graph the line forming a 45 degree angle is the curve of absolute equality while the area between this line and the Lorenz curve represents the deviation from absolute equality. Figure 2 shows the Lorenz curves for 1960 and 1972 superimposed on one another. The decrease in the area representing the deviation from absolute equality confirms the previous observation that during this period the Philippines improved its income distribution.

Figure 2. Lorenz Curves of Total Family Income
1960 – 1972



Source: Appendix A, Tables I,II,VI,VIII a & b

Another measure of inequality of income distribution is the Gini coefficient. It is a single measure calculated by taking the ratio between the area representing the deviation from absolute equality in the Lorenz curve and the area below the curve of absolute equality. From 1960 to 1972, this coefficient dropped from .5260 to .4928.[13]

For most countries, the Gini coefficient ranges between 30% and 70%. Using available data between 1960 and 1972, Todaro[14] classified nations into three categories depending on their Gini coefficient. A Gini coefficient of less than .40 represented low inequality and included countries like Sri Lanka with .37, Taiwan with .32, South Korea .36, Malaysia .36 and what was then East and West Pakistan .37. A Gini coefficient between .40 and .50 represented countries of moderate inequality and included India with .46, Philippines with .50 and Thailand with .50. Countries with a Gini coefficient greater than .50 were considered to have high inequality. No Southeast Asian countries were included in this category but it did include Central and South American and African countries such as Brazil with .61, Columbia .54, Equador .66 and Rhodesia . 62.

During the period 1960-1972, the number of households rose from 4.8 million to 6.5 million or a 36% increase. Nevertheless, the sizeable economic gains during this period enabled average family income to increase by 41%. In both proportional and absolute terms there were fewer households in the two lowest income categories in 1972 compared to 1960.[15]

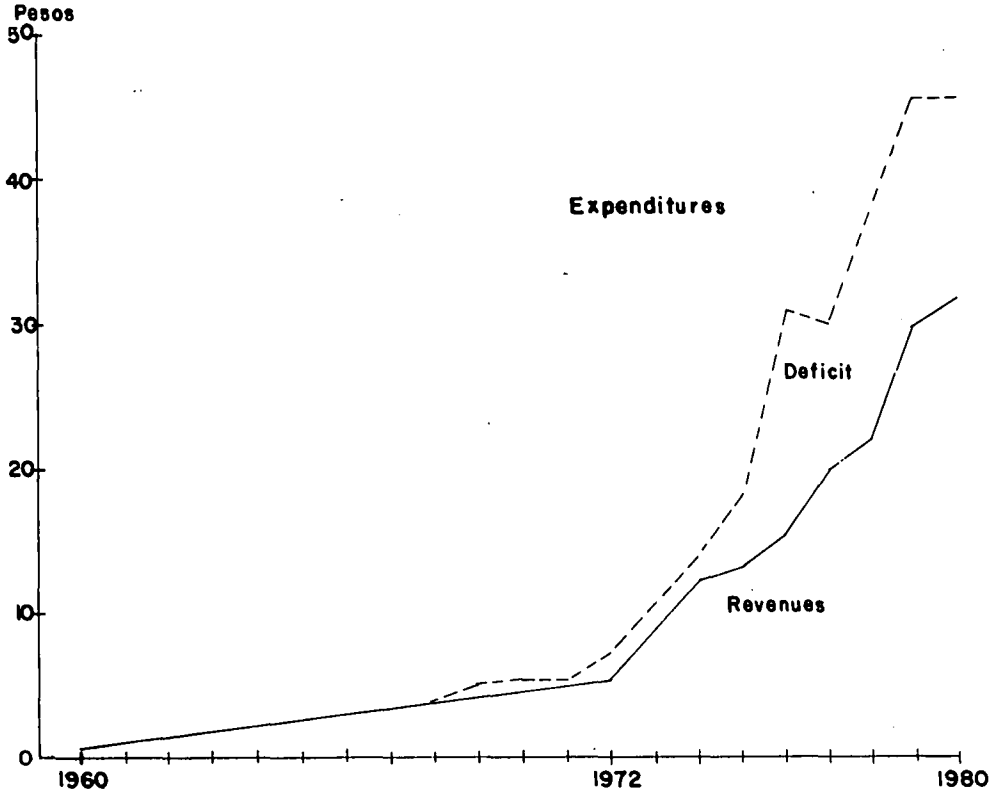
The implications of the foregoing were that in the twelve-year period, development was realized in terms of reduced poverty and a greater degree of equality of income distribution which consequently improved the quality of life of the poor. Many of the very poor families graduated to poor and the poor became less poor. Also during this period the relatively richer groups, arbitrarily defined as those with total family income over ₱10,000 per annum in 1972 (P5000 in 1960), became richer but this happened at a slower pace than the poor when they became less poor. Therefore, it can be successfully argued that the benefits of development trickled down during the period. While income increased for all the income classes, the Lorenz curves in Figure 2 show that for the poorer 40% or so of the population, the income inequality did not improve.

Inadequacy of the Tax System

During this period, total government revenues increased from ₱1.4 Billion to ₱4.9 Billion or 3.5 times as much. Considering adjustment for inflation this increase was 1.7 times as much. Government expenditures on the other hand, increased more sharply from ₱1.4 Billion in 1960 to ₱6.9 Billion in 1972 leaving for the year 1972 alone a ₱2.0 Billion deficit.[16] This implied that government had to borrow because of the inadequacy of

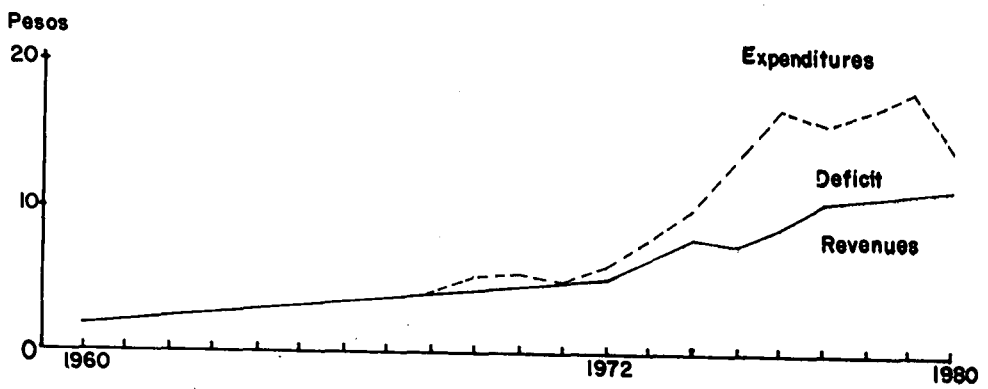
the tax system to provide sufficient funds for government expenditures. If not managed properly, these borrowings can have repercussions a decade or more later when they have to be repaid. Deficit financing was first used in 1969 and again in 1970 for half a billion pesos each year. It was not used in 1971 but amounted to two billion pesos in 1972. With the current economic instability besetting the country, it shows how the unfortunate management decisions of the early 1970's triggered the start of a financial disaster. The term unfortunate management decision is used because deficit financing is not necessary as shown in the subsequent sections. Figures 3-a and 3b show the adequacy of the government revenue system for both current and inflation-adjusted prices.

Figure 3 - a. Adequacy of Revenue System: 1960 to 1980 in Current Prices (Billions)



Source : See Figure 3 - b

Figure 3 – b, Adequacy of Revenue System: in Constant Prices
1960 – 1980
(Billions)



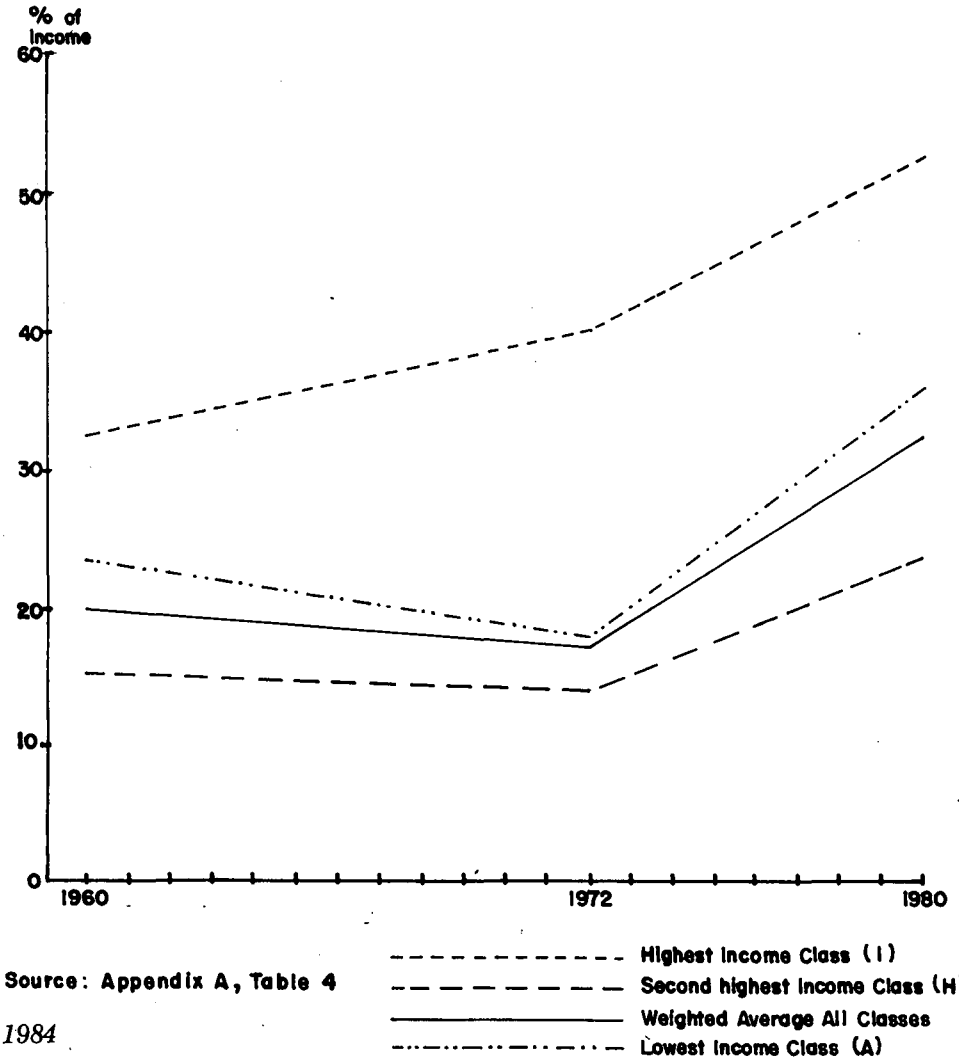
Source for Expenditures:
Leonor Magtolis Briones, *Philippine Public Fiscal Administration*, (Manila: Commission on Audit Research and Development Foundation, 1983), p. 385 and p. 386.

Sources for Revenues:
Appendix A, Tables III, VII and their sources.

Burden of Taxation

Despite the fact that tax revenue in real terms increased 1.41 times, the average burden of taxation decreased from 20.2% to 18.1%. Thus, the increases in tax revenue were solely possible from the fruits of economic growth (GNP increased .84% in real terms). The biggest relief of the tax burden accrued to the lower income class earning below ₱1000 per annum in 1972 (₱500 in 1960). Their tax burden decreased from 23.0% to 18.3%. The drop in the tax burden for the second highest income groups earning between ₱10,000-₱20,000 per annum in 1972 (₱5000 to ₱10,000 in 1960) was from 15.0% to 13.0%. This was well below the average burden of any other income group. The tax burden of the highest income class earning over ₱20,000 per annum in 1972 (₱10,000 in 1960) rose in this period from 33.5% to 40.6%. Figure 4 shows graphically the trend in the tax burden over time.[17]

Figure 4. Tax Burden on Family Income Classes: 1960,1972 & 1980



Source: Appendix A, Table 4

The stable economic growth during this period together with the increase in family income provided the government with an opportunity to adjust the tax structure to a level at least equal to that of government expenditures and in this manner forego deficit financing. This would have required an average tax burden of 25.6% or a 5.4 percentage point increase. However, the government did not take this opportunity but instead chose to reduce the tax burden by 2.1 percentage points. As already pointed out, this resulted in a deficit financing of ₱2.0 billion.[18]

Regressiveness of Taxation

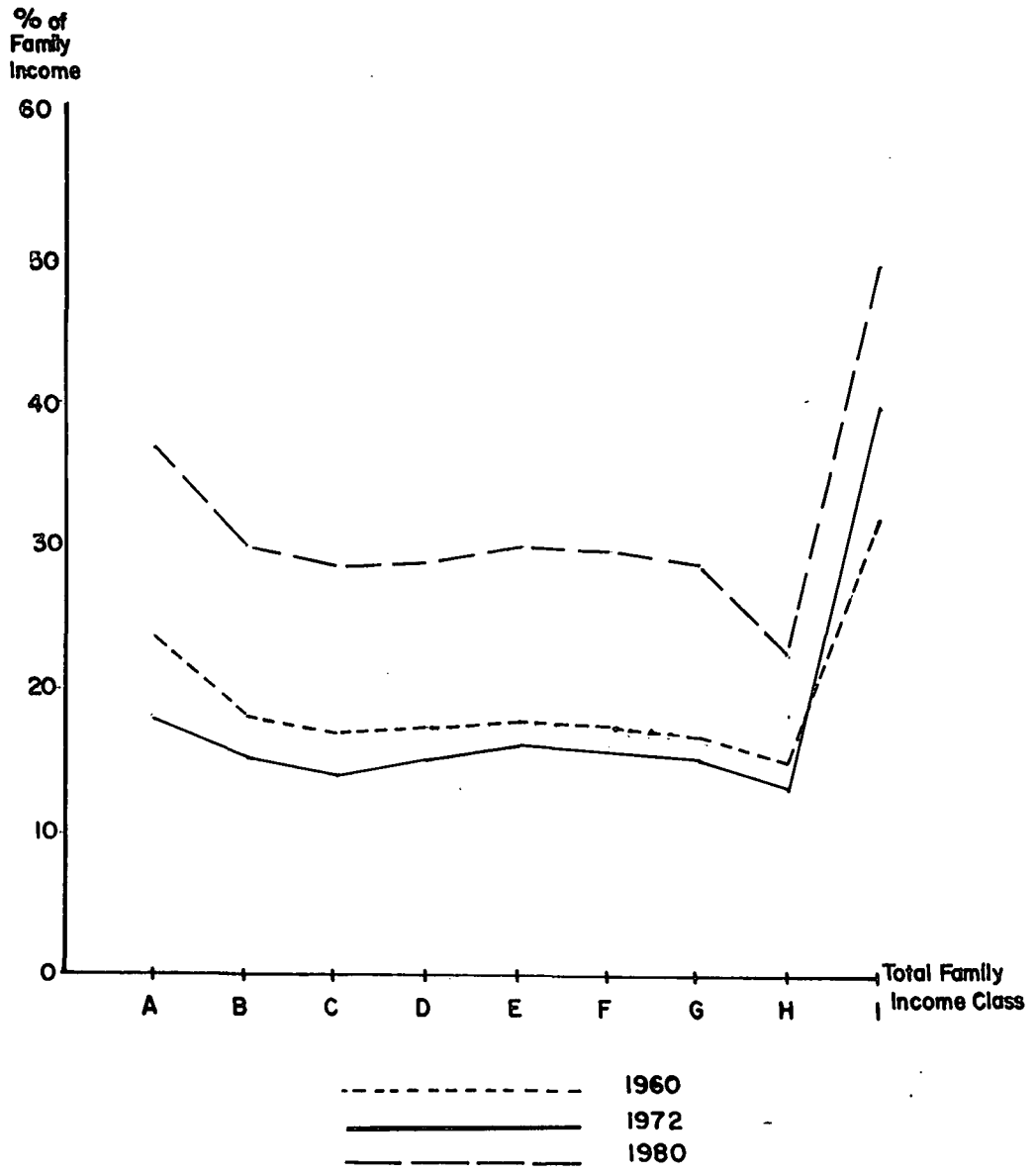
During the period 1960-1972, the tax structure maintained its erratic regressive nature but some improvements were noted. It became less regressive for the lowest income group and more progressive for the highest income group. For the lowest income class earning less than ₱1000 per annum in 1972 (₱500 in 1960) the tax burden decreased by 4.7 percentage points or from 23.0% to 18.3%. This compared to the average drop in the tax burden of 2.1 percentage points or from 20.2% to 18.1%. Despite this improvement, the lowest class still carried a higher tax burden than the average family. The highest income group earning over ₱20,000 per annum in 1972 (₱10,000 in 1960) was the only group for whom the burden rose. It increased 7.1 percentage points or from 33.5% to 40.6%.[19]

The 1960 Study had recommended an enhancement of the principles of equity and the ability to pay. While some improvement was noted for the lowest and highest income groups, it did not fully correct the inadequacies of the 1960 tax structure. Also, for the other income groups, no relative improvements were noted and the burden for each dropped 2 to 3 percentage points. The penultimate highest income group earning between ₱10,000 and ₱19,999 per annum in 1972 (₱5000 to ₱9999 in 1960) carried on the tax burden of 15.0% or 5.2 percentage points below the average of all income groups in 1960. This became 13.0% or 5.1 percentage points below the average of all income groups in 1972. Figure 5 shows the change in the tax burden during the period for each income class. It reflects that noticeable but insufficient improvements had taken place during the period.[20]

Mix of Taxes

In 1960, 27.5% of the total revenue collected was in the form of direct taxes. This proportion of direct taxes changed to 42.6% in 1972 (See Figure 6).[21] This change in tax mix between direct and indirect taxes is important because direct taxes are more progressive than indirect taxes. The effect of the greater reliance can best be demonstrated by examining the tax mix for the lowest and highest income groups earning less than ₱1000 and more than ₱20,000 per annum in 1972 (<₱500 and >₱10,000 in 1960). This is

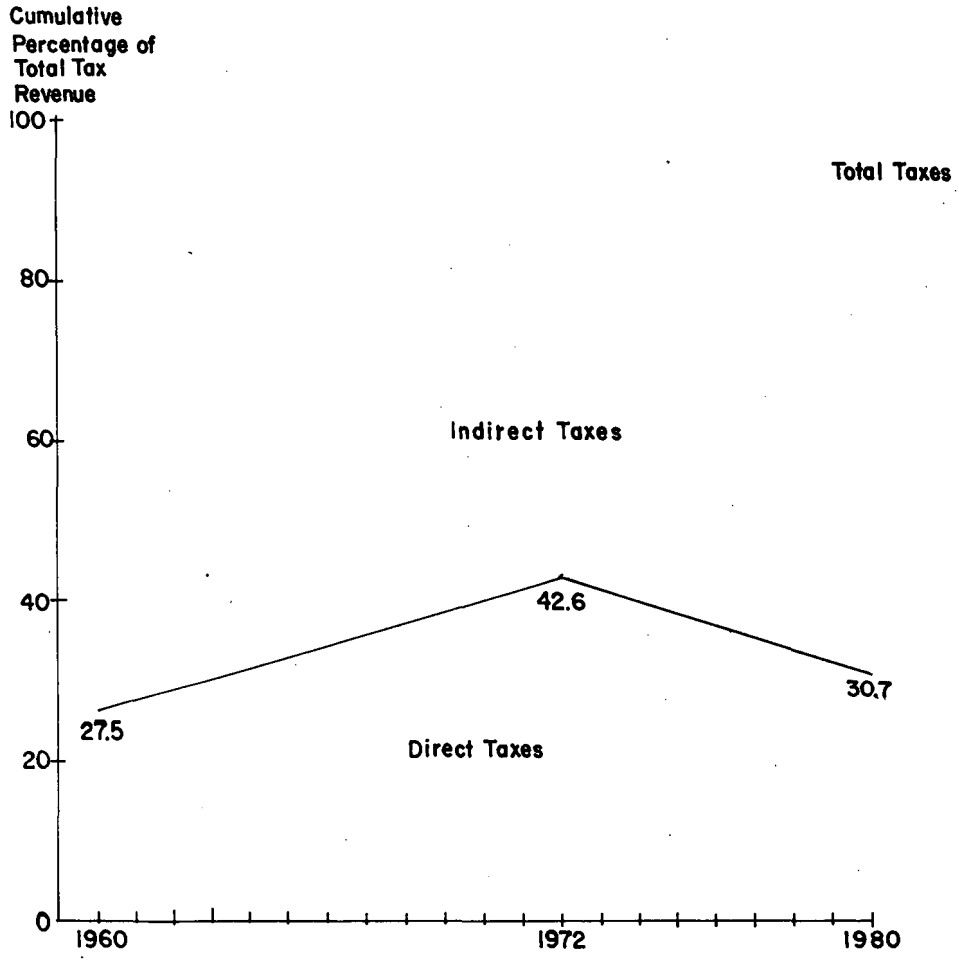
Figure 5. Tax Burden on Family Income Classes: 1960, 1972 and 1980



Note: Total Family Income Classes A to I inclusive are defined in Appendix A, Table VIII.

Source: Appendix A, Table IV

Figure 6. Proportion of Direct and Indirect Taxes



Source: Appendix A, Table V a & c

illustrated in Tables 3-a and 3-b. From these Tables, it can be deduced that the significant reduction of the tax burden on the lowest income group was due almost entirely to the change in the mix of direct and indirect taxes. Similarly, the increase in the tax burden for the highest income group was due almost entirely to the change of mix. For the income groups between the two extremes, the gains and losses of each type of tax in terms of altering the total tax burden tended to offset each other.

From the viewpoint of establishing a more equitable tax system which adheres to the ability to pay principle, the tendency to rely more heavily on direct taxes is a positive development. However, further changes need to be made before the tax system would be fully progressive for all income levels.

TABLE 3-a. 1960 and 1972 Direct and Indirect Tax Burden for Family Income Group below ₱1000 in 1972 (<₱500 in 1960)

	1960			*1972*		
	Total Paid by Class (000)	*%*	*Component of Tax Burden*	*Total Paid by Class (000)*	*%*	*Component of Tax Burden*
Direct taxes	₱ 7,487	7.7	1.8%	₱ 18,218	14.8	2.7%
Indirect taxes	89,715	92.3	21.2%	₱105,191	85.2	15.6%
TOTAL	₱97,202	100.0	23.0%	₱123,409	100.0	18.3%

Source: Appendix A, Tables II and V-a and V-b

Table 3-b. 1960 and 1972 Direct and Indirect Tax Burden for Family Income Group Above ₱20,000 in 1972 (>₱10,000 in 1960)

	1960			*1972*		
	Total Paid by Class (000)	*%*	*Component of Tax Burden*	*Total Paid by Class (000)*	*%*	*Component of Tax Burden*
Direct Taxes	₱222,108	63.5	21.3%	₱1,047,710	77.1	31.3%
Indirect Taxes	₱127,595	36.5	12.2%	310,567	22.9	9.3%
TOTAL	₱349,703	100.0	33.5%	₱1,358,277	100.0	40.6%

Source: Appendix A, Tables II and V-a and V-b

Distributive Capacity of Taxation

In 1960, the lower 20% income group controlled 3.7% of the total family income before taxes and 3.6% after the occurrence of taxes. While the difference was small and could be due to rounding errors, it indicated that the tax structure was slightly regressive or at best neutral in terms of distributing income to this income group. In 1972, the lower 20% income group controlled 3.6% of the total family income before taxes and 3.7% after the occurrence of taxes. While again the difference was small, it reconfirmed the slight improvements noted in the 1972 tax structure to make it more progressive.

Families in the highest 10% income group controlled 42.4% of total income before taxes and 41.2% after taxes in 1960. This meant that taxation altered the income distribution to the extent of 1.2 percentage points from the high to the low and middle income groups. In 1972, taxation lowered the income distribution from 36.3% to 34.3% or by 2.0 percentage points. The redistribution went mainly to the income group earning between 50% and 90% of the income. However, some also went to the lower 50% income group.[22] This is shown in Table 4.

Table 4. Distribution Effect of Taxation on total family income Among Income Classes for 1960 and 1972

Income Group	*1960*			*1972*		
	Before all Taxes	*After all Taxes*	*Distributive Effect*	*Before all Taxes*	*After all Taxes*	*Distributive Effect*
⟨ 20%	3.7	3.6	— 1	3.6	3.7	+ .1
20% — 50%	13.3	13.3	0	15.5	16.1	+ .6
50% — 90%	40.6	41.9	1.3	44.6	45.9	+1.3
⟩ 90%	42.4	41.2	—1.2	36.3	34.3	—2.0

Source: Appendix A, Tables VIII-a and VIII-b

The preceding data show some improvement of the distributive capacity of taxation although more is needed to achieve greater equality among the Filipino families. The data also show that total income in the hands of the top 10% of the families had decreased 6.9 percentage points or from 41.2% in 1960 to 34.3% in 1972. Of these 6.9 percentage points taxation caused .8 percentage points. Figure 7 depicts the distributive capacity of taxation by comparing the amount of income enjoyed by various income classes before and after the incidence of taxation.

Figure 7. Distributive Capacity Of Taxation: 1960, 1972 & 1980

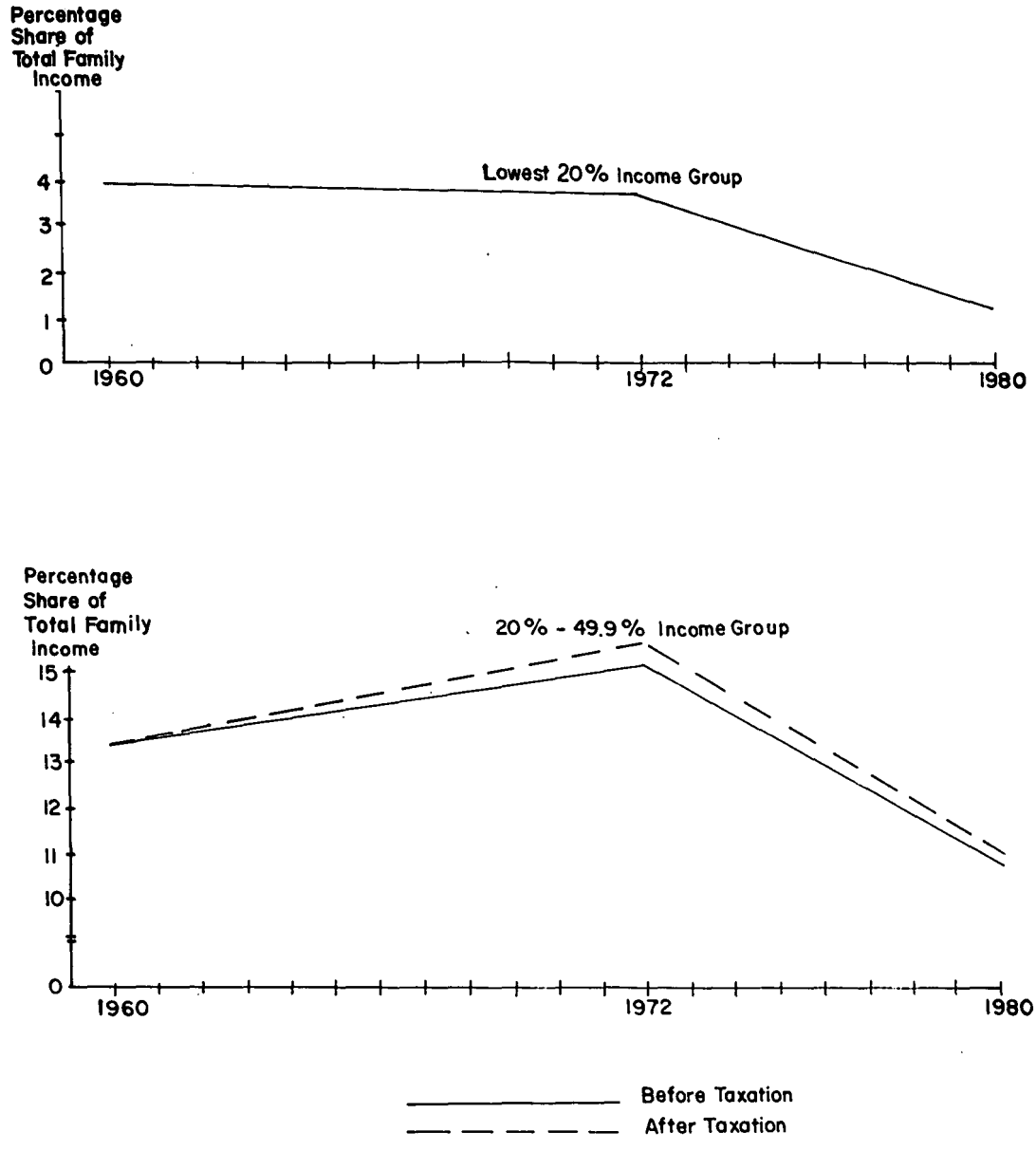
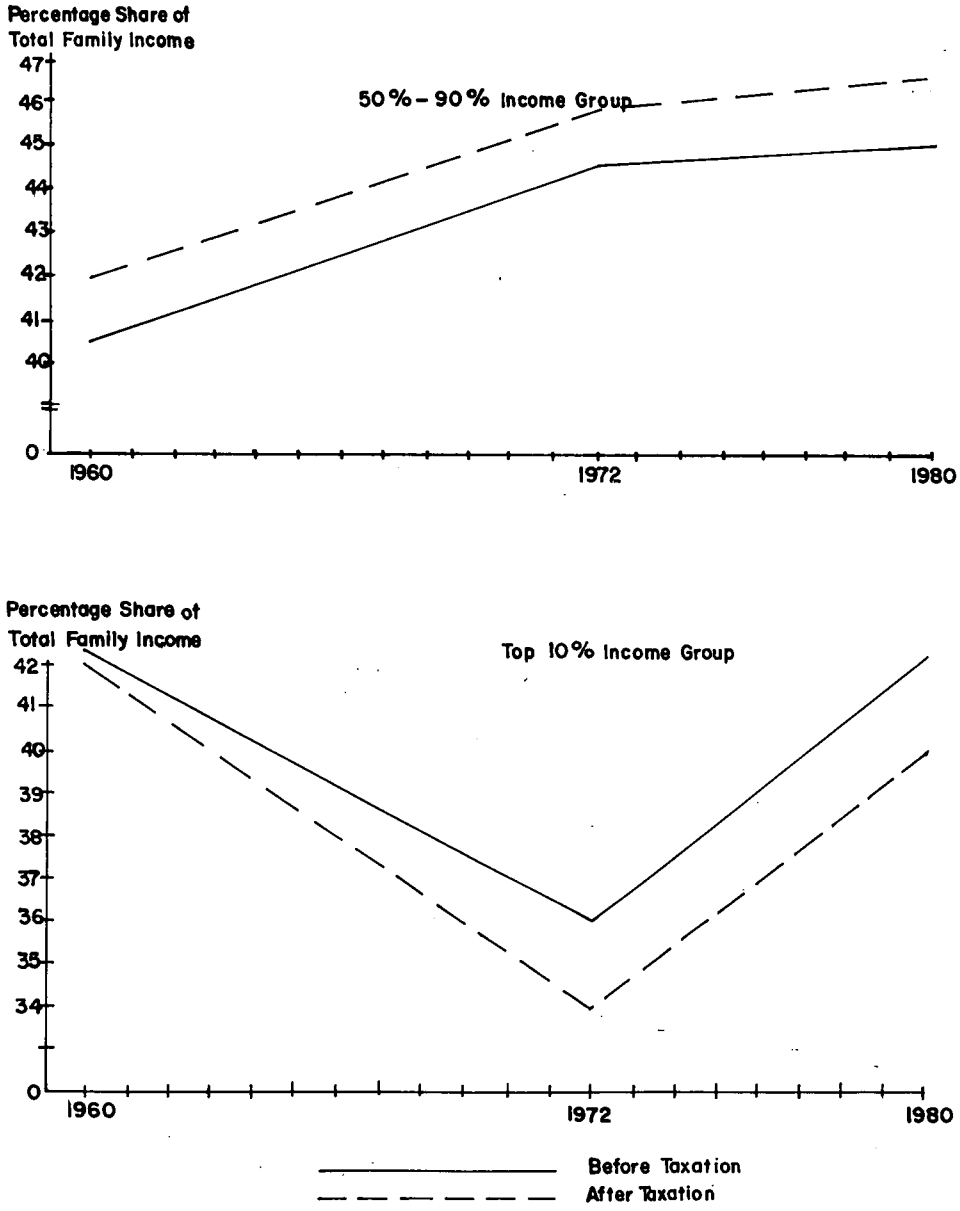


Figure 7. Distributive Capacity Of Taxation : Continued
1960, 1972 and 1980



Source: Appendix A, Table 8

Summary of 1960-1972 Data

While development is a slow process, the gains made in the 1960's and early 1970's were in the right direction as they related to family income and its distribution, the incidence of taxation or the burden, and the mix of taxation including its distributive capacity. If the momentum that was noted during this period had been maintained, then the nation could have been assured of graduating into a developed nation in a half century or so. The exception to the positive trend was deficit financing which started near the end of this period. Deficit financing had to be resorted to because of the insufficient amount of revenue collected compared to government expenditures.

The next section examines the trends from 1972 to 1980 and compares them with the trends of the 1960-1972 period. At the outset, the era of Martial law looked promising. The progressiveness and equity aspects of taxation became enshrined in the Constitution and the new legislative powers of the Executive branch of government provided a unique opportunity to pass legislative tax provisions that then had been unpopular or impossible to pass because of the vested interests of the legislators. The government was also committed to improve the status of the poor.

Development during the Period 1972-1980

Family Income

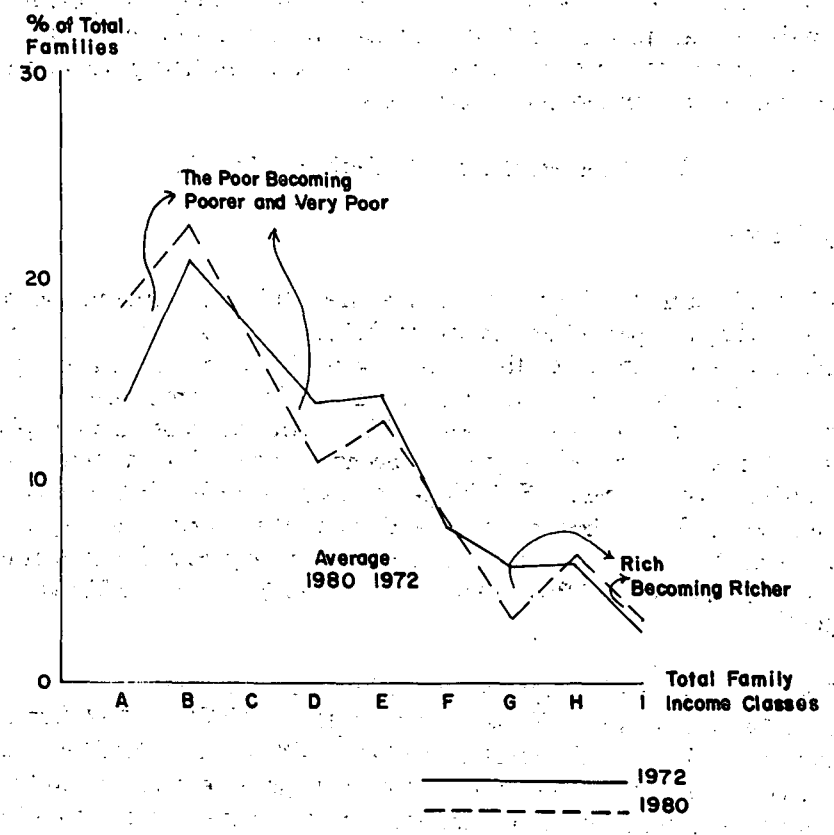
After adjusting for inflation, the average total family income decreased by 5.1% during the period and stood at ₱11,715 per family in 1980. Figure 8 which traces the shifts in the distribution of income during the period shows that the drop in the average total family income was not shared equally, rather two trends occurred. The lower income groups became poorer and the higher income groups became richer. The number of very poor families earning below ₱3000 per annum in 1980 (⟨ ₱1000 in 1972) increased to 1.654 million or almost double the number of eight years before. In relative terms, the percentage of these very poor families equalled 18.9% of all families in 1980. This compared to 14.4% in 1972 and 25.4% in 1960.[2 3]

The proportion of people in the middle income classes ranging from ₱6000 per annum to ₱29,999 per annum in 1980 (₱2000 to ₱9999 in 1972) dropped from 57.1% of all families in 1972 to 50.5% of all families in 1980. Of the 6.6 percentage points drop, 5.2 percentage points moved to the two lowest income groups and 1.4 percentage points moved to the two highest income groups. The number of families in the second highest income group earning between ₱30,000 and ₱59,999 per annum in 1980 (₱10,000 to ₱19,999 in 1972) increased from 5.5% of the total population to 6.3% of the total population or from 355,000 to 551,000 families. The income

group earning over ₱60,000 per annum in 1980 (⟩ ₱20,000 in 1972) increased by .6 percentage points or from 1.5% of the total population in 1972 to 2.1% in 1980 or from 97,000 families in 1972 to double that number or 184,000 in 1980.

If one examines the 1980 graph representing the family income distribution in Figure 8, it is evident that it is more skewed to the right and less normal than the curve for 1972 in relation to the average family income of ₱11,715 per annum. It can, therefore, be said that in relation to achieving equity during this period, the development was negative. The gap between the rich and the poor increased. The rich became richer and the poor became poorer. This is in contrast to the 1960-1972 period when everyone became "richer" and the number of people in the middle income groups increased.

Figure 8. Shifts in Distribution of Income Classes: 1972 and 1980

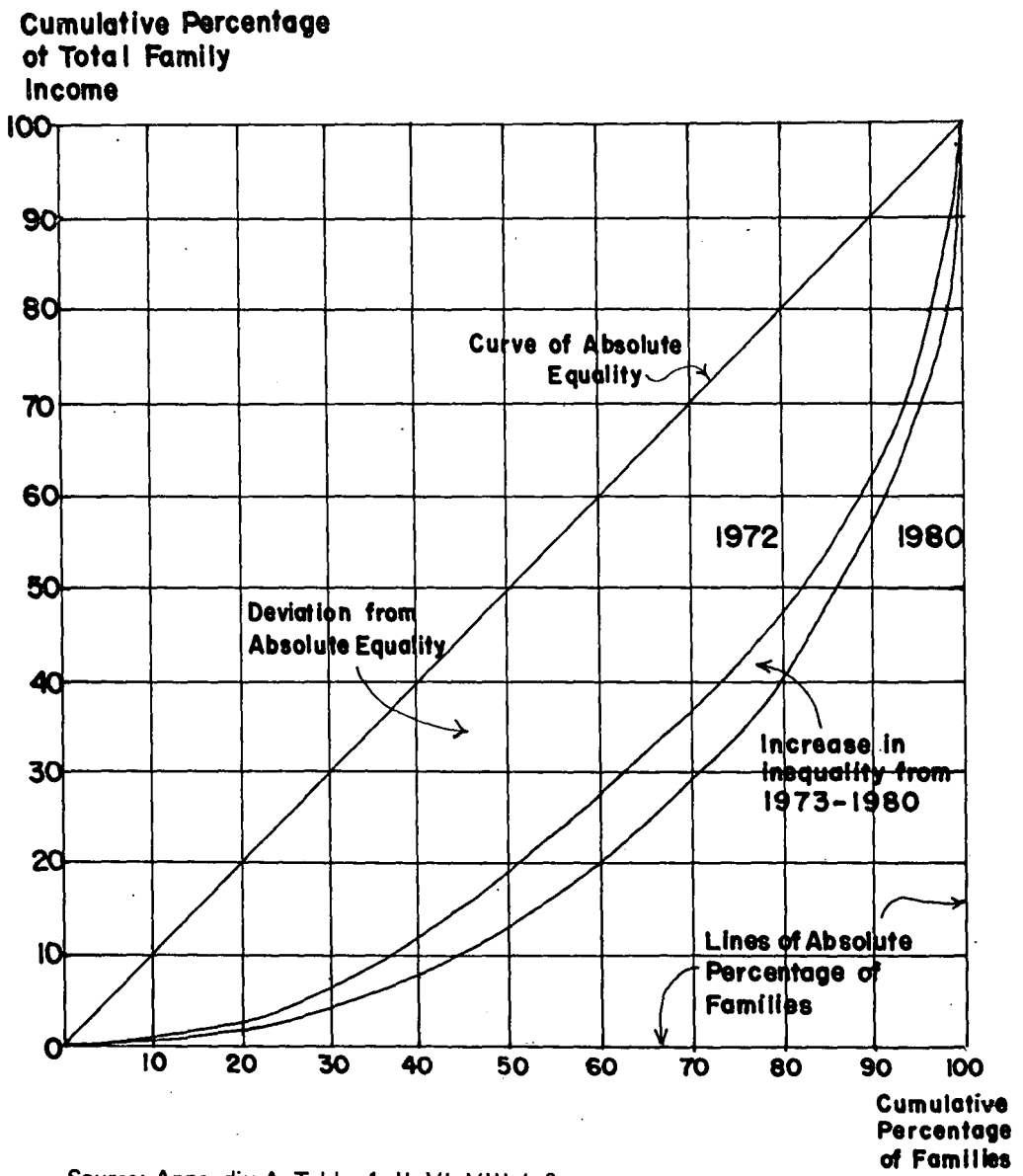


Note: Total Family Income Classes A to I inclusive are defined in Appendix A, Table VIII

Source: Appendix A, Tables I and II

The same conclusions can be reached when examining the shift in the Lorenz curve between 1972 and 1980. These curves for the two years are drawn superimposed on one another in Figure 9. The area between the two curves represented the increase in income inequality that occurred during the eight year period. This shift resulted in an increase in the Gini coefficient from .4928 in 1972 to .5808 in 1980.[24] Using the categorization of Todaro, the increase places the Philippines squarely in the high inequality category.

Figure 9. Lorenz Curves of Total Family Income: 1973 - 1980



Source: Appendix A, Tables 1, II, VI, VIII b & c

Still another way to examine the same data is to study the trend in the total income enjoyed by various income groups. In 1980 the lowest 20% income group controlled 1.7% of total family income before taxes and 1.6% after the incidence of taxation. This compares to 3.6% and 3.7% in 1972 and similar percentages in 1960 if those preliminary data from NCSO are correct. The development during the martial law period is astonishing and their implications frightening: the meager and little bit of income enjoyed by the lower 20% income group and which amounted in 1972 to only 3.6% was cut into less than half. The richest 10% in the same period increased their share of total income by 5.9 percentage points from 36.3% in 1972 to 42.2% in 1980. These data show once more but in a different way the conclusion already reached, i.e., that the lower income groups fully absorbed the decrease of 5.1% in average family income as well as the gains in total income of the higher income groups in society.[25]

Inadequacy of the Tax System

During the period, total revenues increased 6.8 fold or from ₱4.9 Billion to ₱33.3 Billion. Adjusting for the rampant 200% inflation during this period, this represented a 2.3 fold increase. The increment in taxation in real terms was twice as rapid during this period than in 1960-1972 period. While tax revenues increased substantially during the period, government expenditures rose even more quickly from ₱6.9 Billion to ₱45.4 Billion. As a result the shortfall in tax revenues compared to government expenditures in 1980 amounted to a staggering P13.1 Billion.[26] Table 5 and Figures 3a and 3b show these data.

Table 5. Total Government Revenues and Expenditures for 1960, 1972, 1980 in current and constant Prices
(Millions of Pesos)

	Current Prices			*Constant Prices*		
	1960	*1972*	*1980*	*1960*	*1972*	*1980*
R evenues	₱1413	₱4877	₱32287	₱2148	₱4877	₱10958
Expenditures	1396	6869	45419	2115	6869	15415
Deficits	₱ -17	₱1992	₱13132	₱ -33	₱1992	₱ 4457
% Deficits	None	29.0%	28.9%			

Sources: Appendix A, Tables III and VII; Leonor Briones, *Philippine Public Fiscal Administration* (Manila: Commission on Audit, Research and Development Foundation, 1983), p. 385.

The inability of the tax system to meet government expenditures was a major reason for the economic crisis that the country faced in 1984. The government had to borrow to cover the deficits and much of this deficit financing was done through foreign borrowings. This resulted in the country becoming dependent upon an unstable and unreliable foreign economy. During the period under examination and in the early 1980's, there was an unfavorable economic climate. Prices for imports needed by developing nations such as fertilizers, oil and industrial goods rose rapidly while prices for traditional exports such as copra and metals decreased in real terms. Interest rates in the beginning were negative in real terms but rapidly increased in the latter part of the period and reached all—time highs in the 1980's.

The foregoing analysis appears to be no more than a recital of aggregate economic statistics which have no relevance to the country's poor families. Yet, while the statistics are indeed aggregate, they affect the nation's poor more than anyone else. It is the poor that must battle with the consequences of the economic realities such as inflation caused by the instability of tax revenues for adequately financing government expenditures, or the devaluation of the peso that occurred in 1983 which had been the result of many years of foreign borrowings purportedly to cover government deficits. The following sections show the extent to which the aggregate economic statistics affect the lower income classes.

Burden of Taxation

The 2.3 fold increase of tax revenues in inflation-adjusted terms resulted in an increase in the tax burden of 14.4 percentage points from 18.1% in 1972 to 32.5% in 1980. This represents an 80% increase over 1972 and compares to a drop of 2.1 percentage points or 10% during the 1960-1972 period. The 2.1 percentage points drop in the tax burden during the 1960-1972 period was possible because in real terms the economy had grown faster than tax revenues (84% vs. 72%, respectively). In the 1972-1980 period, however, growth in the economy in real terms amounted to 67% while the increase in revenue in real terms was 125%. As a result, 80 percentage points increase in revenue came from an increase in the tax burden and 45% from the growth of the economy.[27]

The largest increase in the tax burden accrued to the lowest income class earning less than ₱3000 per annum in 1980 (< ₱1000 in 1972). Their burden doubled from 18.3% in 1972 to 36.7% in 1980. The implications of this situation are tremendous. It means that the very poor paid an astonishing 36.7% of their income to taxes. This is clearly contrary to both the equity and ability to pay principles that were enshrined in the Constitution at the outset of this period. The increases in the tax burden for all the other income groups ranged from 13% to 15% with the exception of the penultimate highest income group earning between ₱30,000 and ₱59,999 per

annum in 1980 (between ₱10,000 and ₱19,999 in 1972) whose burden increased only by 11.2%. As a result, this group had a tax burden of 3.9 percentage points lower than any other income class earning between ₱3,000 and ₱29,999 in 1980, and 8.3, 12.5 and 29.6 percentage points lower than the average burden and the burdens of the lowest and highest income groups, respectively. Again, the equity and the ability to pay principles have been violated. Figure 4 shows the tax burden of certain income groups.[28]

It is not so much the increase in the average tax burden which can be fully justified by the need to finance government expenditures but rather the changes in the burden by income groups that make the 1980 data so alarming. The progress made toward a more equitable distribution of income in the 12-year period ending in 1972 has not only been wiped out but further deterioration has occurred during the eight-year period ending in 1980.

Regressiveness of Taxation

During the period 1972-1980 the tax structure's regressive nature deteriorated further for two income classes as demonstrated in Figure 5. The lowest income class earning less than ₱3,000 per annum in 1980 (⟨₱1000 in 1972) had its tax burden increased by 18.4% (from 18.3% to 36.7%). This compared to an average increase in the tax burden of 14.4% or from 18.1% to 32.5%. The tax burden for the penultime highest income group earning between ₱30,000 and ₱59,999 per annum (₱10,000 — ₱19,999 in 1972) increased only by 11.2% from 13.0% to 24.2%. This made the tax burden of this group 8.3 percentage points below the average and 12.5 percentage points below the lowest income group. The tax burden of the highest income group earning in excess of ₱60,000 per annum (⟩₱20,000 in 1972) increased from 13.2 percentage points to 53.8%.[29] These data as shown in Figure 5 clearly demonstrate how the tax system deteriorated and became more regressive.

At the outset of the period, the Constitutional reforms brought in through Martial law were actively supportive of a progressive tax system based on the principles of equity and ability to pay. This policy could have been the cornerstone for the social reforms during the Martial law period. Yet, the hundreds of tax reforms passed during Martial law era and the restructuring of the Bureau of Internal Revenue (BIR) during this period failed to make the tax reforms more equitable or progressive.

Mix of Taxes

Direct taxes as a proportion of total taxes dropped 11.9 percentage points or from 42.6% in 1972 to 30.7% in 1980. This is depicted in Figure 6. The increased use of direct taxes resulted in the increased regressiveness

of taxation. Moreover, the momentum gained between 1960 and 1970 toward an equitable tax system was reversed. This can best be illustrated by examining the components of taxes paid for by the lowest and highest income groups earning less than ₱3000 and more than ₱60,000 per annum, respectively in 1980 (<₱1000 and >₱20,000 in 1972).[30] This is shown in Tables 6-a and 6-b.

Table 6-a. 1972 and 1980 Direct and Indirect Tax Burden for Family Income Group Below ₱3000 in 1980 (<₱1000 in 1972)

	1972			1980		
	Total Paid By Class (000)	*%*	*Component of Tax Burden*	*Total Paid By Class (000)*	*%*	*Component of Tax Burden*
Direct Taxes	₱ 18,218	14.8	2.7%	₱ 43,515	7.2	2.6%
Indirect Taxes	105,191	85.2	15.6%	558,673	92.8	34.1%
TOTAL	₱123,409	100.0	18.3%	₱602,188	100.0	36.7%

Source: Appendix A, Tables II and V-b and V-c

Table 6-b. 1972 and 1980 Direct and Indirect Tax Burden for Family Income Group Above ₱60,000 in 1980 (>₱20,000 in 1972)

	1972			1980		
	Total Paid By Class (000)	*%*	*Component of Tax Burden*	*Total Paid By Class (000)*	*%*	*Component of Tax Burden*
Direct Taxes	₱1,047,710	77.1	31.3%	₱5,585,057	61.7	33.2%
Indirect Taxes	310,567	22.9	9.3%	3,462,878	38.3	20.6%
TOTAL	₱1,358,277	100.0	40.6%	₱9,047,935	100.0	53.8%

Source: Appendix A, Tables II and V-b and V-c.

The two tables show that the increasing reliance on indirect taxation was almost exclusively the reason for the increase in the tax burden for the lowest income group. Equally, the heavy reliance on indirect taxes resulted

in the tax burden of the highest income group increasing 1.1 percentage points less than the average increase.

Despite the fact that the change of mix of direct and indirect taxation caused the tax system to become more regressive, the proportion of direct versus indirect taxes collected within the Philippines was similar compared to other countries relatively within the same stage of development. For example, using data between 1972 and 1976 Malaysia had 36%, Thailand 22.5% and Indonesia 70.7% of direct taxes. Lesser developed Asian countries consisting of India, Nepal, Pakistan and Sri Lanka had an unweighted average of 16.6% of direct taxes while for 17 developed nations the percentage of direct taxes constituted an average of 66.4% of total tax intake.[31]

Distributive Capacity of Taxation

Although the distributive capacity of taxation improved marginally for all except the lowest 20% income class, the taxation system continued to be ineffective in redistributing the income inequality of the nation. The 2.4 percentage points of family income of the highest 20% income class and .1 percentage point of the lowest 20% income class were redistributed to other income categories. The bulk, however, benefited the 50% to 90% income group. In 1980, the lowest 20% income group only had 1.7% of total income. After the incidence of taxation this became 1.6%. The highest 10% income group enjoyed 42.2% of total income before taxes and 39.8% after taxes. The income classes earning between 20% and 89.9% of total family income were the beneficiaries of this reduced inequality, specially the group earning between 50% and 90% of total family income.[32] These data are summarized in Table 7.

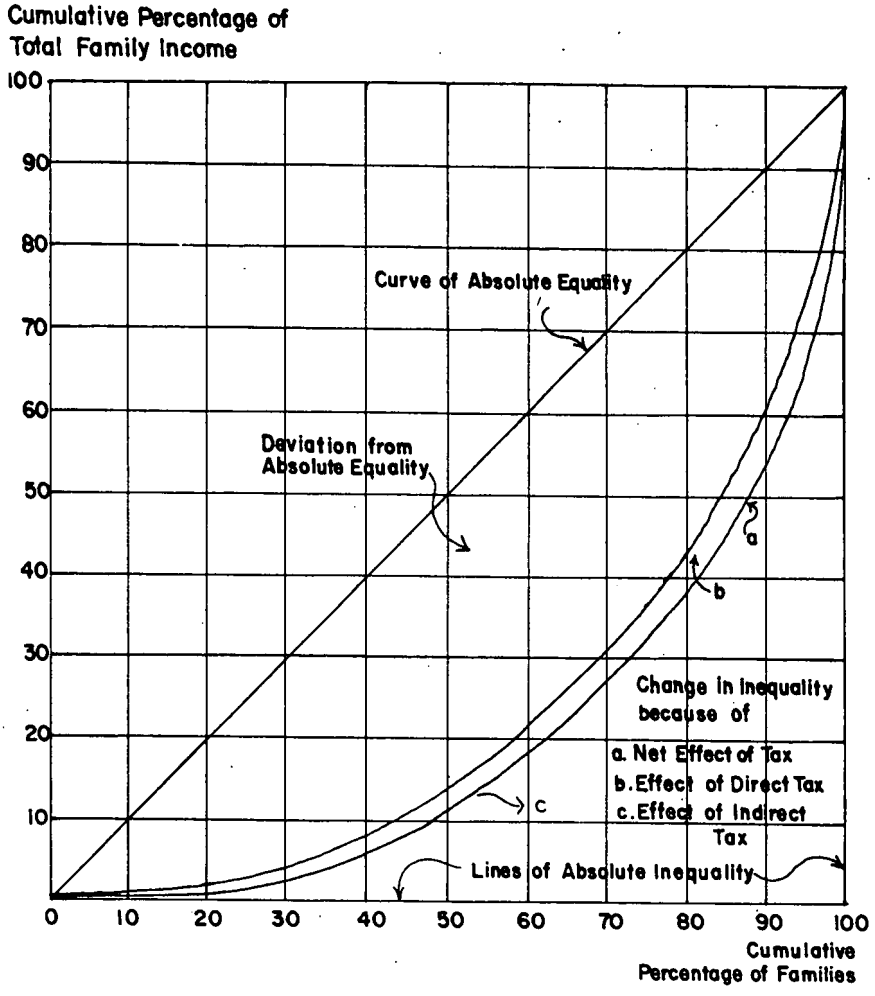
Table 7. Distributive Effect of Taxation among Income Classes for 1972 and 1980

Income Group	Distributive Percentage of Total Family Income					
	1972			1980		
	Before All Taxes	After All Taxes	Distributive Effect	Before All Taxes	After All Taxes	Distributive Effect
⟨20%	3.6	3.7	+ .1%	1.7	1.6	- .1%
20%-50%	15.5	16.1	+ .6%	11.0	11.7	+ .7%
50%-90%	44.6	45.9	+1.3%	45.1	46.9	+1.8%
⟩90%	36.3	34.3	-2.0%	42.2	39.8	-2.4%

Source: Appendix A, Table VIII-b and VIII-c

It is also possible to show the distributive capacity of taxation by superimposing the Lorenz curve before and after the incidence of taxation. This is done for 1980 in Figure 10. This figure also shows the distributive effects of direct and indirect taxes. As calculated from the Lorenz curve, the incidence of taxation reduces the Gini coefficient only marginally or from .5808 to .5648 in 1980.[33]

Figure 10 • Lorenz Curves of Total Family Income Before and After the Effects of Taxation : 1980



Source : Appendix A, Tables I, II, V, VI, VIII

The conclusion of the distributive capacity of taxation is that its impact is very minimal, even if only direct taxes were relied upon. It may be stated that the goal of development in terms of creating a greater equality has not been achieved through the tax system. Also, the data point out that unless radical changes in the potentially powerful fiscal tool of taxation are effected, it cannot be relied upon to alter the income distribution patterns of the nation. Thus, other mechanisms to achieve that goal must be resorted to.

Summary of 1972-1980 Data

The conclusion from the foregoing data is that the trends were alarming for each examined aspects. The gains made during the 12-year period (1960-1972) were more than reversed during this 8-year period and development was negative. The nation's family income distribution patterns became more unequal. The revenue system became more inadequate for generating the resources necessary for government expenditures. The tax burden increased especially for the low-income groups, making the tax system more regressive. Finally, the revenue system was unable to redistribute income.

To improve the quality of life requires access to resources for which income is the best measure. During the Martial law period, the poor and very poor lost their access. In a sense, they were left to flounder and, to perish. They were condemned to a life of little hope. A distressing aspect is that contrary to the mandate of the new Constitution the tax system encouraged this negative trend.

The Causes of the Deterioration

The question may be asked as to whether the causes of the deterioration in the equitable distribution of family income and of the tax system during the Martial law period were political, economic, moral or administrative. The answers will undoubtedly differ depending on who provides the answer.

Politicians refer to the worldwide economic recession and the rampant inflation which resulted from the threefold increases in oil prices in 1973 and again in 1979. Yet, it was a conscious decision of the Martial law regime to resort to deficit financing in order to pay for the ambitious development projects as well as the government's social programs, many of which were designed to benefit the poor.[34] Moreover, the Martial law regime did not take the opportunity to enact tax measures and other legislation that could have minimized the deteriorating conditions.

Although economic conditions in the period 1973 to 1980 were harsh in general, the economy grew at a rate slightly faster than in the 1960-1972 period. The fruits of the economic growth, however, had to be shared by

more families and government took an increasingly large share. This resulted in a drop of real family income of 5.1%. The deterioration of the tax system and of the family income distribution patterns was certainly not proportionate to the drop in real family income and other economic ills. Stated differently, economic conditions were not fully to blame.

The moral question is probably the most difficult to answer. Did the accumulation of a greater proportion of the income reflect an expectation of the rich conditioned by many years of increases in income? Were the rich fully aware of the shifting distribution of income? Were financial planners and legislators aware? Although some ignorance can be claimed, total unawareness cannot be argued; one only has to ask or observe the man on the street to notice that he has become poorer. The moral evaluation, however, must go beyond and the following more profound questions must be asked: "Are the rich willing to reverse the trend? Are they willing to give up their income in favor of the poor? Are legislators prepared to enact the necessary legislation? "

Whether or not deterioration can be traced to administrative capability is of particular interest to students of Public Administration. It can be considered from the aspect of whether or not they were aware of the trends and how effective they were in taking action. In terms of awareness, data on the adequacy of taxation are readily available to anyone within a reasonable period after year-end. For concerned administrators, the data probably are available throughout the year. Preliminary data on income distribution are released quarterly for the period one-half year earlier and are available. The data on the tax burden and the distributive aspects of taxation that were developed in this paper are not available however. It may, therefore, be argued that definite and full information was not available to administrators. On the other hand, aggregate statistics should have alerted administrators to ask for more detailed analysis. The importance of effective action with sufficient foresight cannot be overstressed. As stated by the World Bank's World Development Report for 1983:

> . . . the developing countries' present difficulties are the culmination of events and policies dating back a decade or more. They are a consequence . . . . partly of weakneses in domestic management.[35]

The Martial law period supposedly was an era during which legislation could have easily been passed regardless of the legislator's personal interests. It was also a period allegedly dedicated to the plight of the poor and equality in taxation. Within this framework, the political leaders and administrators were not effective in taking corrective action.

The 1980s – Preliminary Data

Data for 1981 to 1983 are still too preliminary and inadequate to interpret. With the present political, economic and social crisis it is difficult to

predict any trend even for one or two years. Nevertheless, the available data do give some insights.

In terms of adequacy, the tax system continued to perform badly and huge deficits occurred each year. The International Monetary Fund has put pressure on the government to reduce the deficits. This involves the painful task of making structural adjustments that will increase revenues as well as decrease government expenditures including large-scale development projects.

The economy has gone through a very difficult period of high inflation, high import prices, low prices for traditional exports and high interest rates. The peso was devalued to roughly half its value compared to the US dollar during the three-year period. Under these conditions, one would expect average family income to have dropped. Yet, the NCSO data show that it increased 30% in real terms. The data, however, are preliminary and subject to modification.

Data on family income show that the lowest 20% income class controlled 3% of total family income as of the first quarter of 1983 or an encouraging increase of 1.3 percentage points compared to the trend of 1980. The top 10% income class increased its share by a worrisome 3.5% during the period or from 42.2% to 45.7%, indicating that the trend toward greater extremes is continuing during the crisis of the 1980s. Data on tax distribution are not available.

In 1982 the government replaced the personal income tax system, which was based on total income less allowable expenses, with a gross income tax system. The latter, like its predecessor, is also progressive but reduced allowable deductions of expenses against taxable income. It was introduced because it was believed to be simpler to administer and would therefore minimize if not eradicate loopholes thereby ensuring an increase in total tax intake. The 1982 and 1983 data are not yet conclusive as to whether more taxes were collected. The effect on the regressiveness and the burden cf taxation is expected to be minimal, because the gross income tax system as earlier implied levies taxes almost exclusively on the two highest income groups. Appendix D elaborates on the Gross Income Tax System.

Conclusion

The next few years and possibly all of the 1980s will be years of economic difficulty when the country will have to make structural adjustments that will significantly affect the social fiber of the people in all the income classes. The challenge of government will be to understand the trends in the nation's economy such as those presented in this paper. Public administrators and policy-makers must understand the shifts in the total family earnings and the role of taxation as well as government expenditures. They must compre-

hend the impact of these factors on the well-being of the various income groups of society. They must control and not tolerate the damages that can be done by a tax system that produces inadequate revenues for financing government operations especially in the long run. All these require better and up-to-date information. The 1960 Study should be repeated for 1980 data and for each five years thereafter. These studies should also be updated annually as was done in this paper. With a full understanding of the data, the trends and the underlying principles, government must pass legislation to first halt and then reverse the trends that occurred in the 1970s and appear to continue in the 1980s. The tax principles of equity, ability to pay as well as social justice must be pursued vigorously regardless of their difficulty.

All these actions require long-term political wisdom, a strong moral commitment and administrative capability. Decisions made now will affect the people especially the poor in the 1990s. Hopefully, by that time the Filipino people can look back and comment on how sound decisions made in the mid-1980s have resulted in positive structural changes. These ensure that the poor are no longer forced to shoulder both the burden of a drop in family income and that of the rich increasing their share of family income. Only when this happens can the dignity of the poor be restored and social development truly take place.

Endnotes

[1] Unless otherwise stated, income earnings or such similar terms refer to total family income whether monetary, in kind or a combination thereof. Amounts are expressed in Pesos per annum.

[2] In this paper, the terms tax and revenue are used interchangeably to denote all of the government's monetary income derived from taxes, licenses and fees.

[3] Source: Appendix A — Table VII.

[4] Ibid.

[5] Michael P. Todaro, *Economics for a Developing World* (London: Longman Group Limited, reprint, Quezon City: Phoenix Press, 1977), p. 415.

[6] Leonor Magtolis-Briones, *Philippine Public Fiscal Administration.* (Manila: Commission on Audit Research and Development Foundation, 1983), Ch. 6.

[7] Source: Appendix A — Tables I, II and VI.

[8] Philippine Republic Joint Legislative-Executive Tax Commission, A Study of Tax Burden by Income Class in the Philippines. 1964.

The statement that there is no subsequent comprehensive study was based on:

a. A research by the author at the National Tax Research Center (NTRC) Library.

b. Statement made by Dr. Agustin Kintanar, Jr. in his paper entitled "Philippine Taxation Under Martial Law (1972-1981)" presented on April 6, 1983 at State Accounting and Auditing Center (SAAC) in connection with UP-CPA/ COA Professorial Chair in Public Fiscal Administration.

c. References to that study to explain the Philippine Tax system in the 1983 text entitled Economics by Gerardo P. Sicat (Manila: National Bookstore, 1983).

In 1974, however, the NTRC did update the study using 1971 data.

[9] Appendix A — Tables III and VII.

[10] The Gini coefficient was not calculated in the 1960 study but rather was determined by the author of this paper using data from the 1960 study. It was calculated by plotting the Lorenz curve (Figure 2) and then physically counting the number of graphic squares inside the area representing deviation from absolute equality and dividing this number by the graphic squares underneath the curve of absolute equality. Obtaining the Gini coefficient in this manner is fairly accurate and avoids the understatements associated with estimation formulas. The Gini coefficient after taxation was determined in like manner.

The uses and limitations of the Gini coefficient are explained in William Loehr and John P. Powelson, *The Economics of Development and Distribution* (New York: Harcourt Brace Jovanovich, Inc., 1981), ch. 5.

[11] The data for this Table appeared on Page 66 of the 1960 study. The figures, however, have been recalculated by the author to correct apparent inaccuracies in the distributive effect of all taxes on the lower 20% income group and to make the data comparable to similar data calculated in the paper for 1972 and 1980. The Table using the data of the 1960 study would be:

Percentage of Income Distribution

Percentage of Households	Before all Taxes	After all Taxes	Distributive effect	After direct Taxes	Distributive effect	After Indirect Taxes	Distributive effect
⟨20%	4.2	4.6	+.4	4.9	+.7	3.9	-.3
20%-50%	13.1	13.3	+.2	13.3	+.2	12.8	-.3
50%-90%	40.5	41.8	+1.3	42.0	+1.5	40.5	0
⟩10%	42.2	40.3	-1.9	39.8	-2.4	42.8	+.6

[12] Appendix A — Table I, II, VI plus the following calculations

Year	Number of Families (000,000)	Total Family Income		Average Family Income	
		Current Prices (000,000)	Constant Prices (000,000)	Current Prices	Constant Prices
1960	4.751	₱ 7,004	₱14,008	₱ 1474	₱2963
1972	6.449	₱ 26,983	₱26,983	₱ 4184	₱4184
1980	8.750	₱102,505	₱34,168	₱11,714	₱3971

Increase (Decrease) in average family income (Constant Prices):

4184/2963 = 1.41 or 41%
3905/4184 = .949 or 5.1%

Calculations of Percentage of families earning less than average income:

Year	Average Income	Class	%	%
1960	₱ 1474	A	25.4	= 25.4
		B	30.9	= 31.0
		C x 474/500	16.2 x 474/500	= 15.4
		Total		= 71.8
1972	₱4184	A	14.4	= 14.4
		B	21.5	= 21.5
		C	17.6	= 17.6
		D	13.5	= 13.5
		E	14.6 x 184/2000	= 1.3
		Total		= 68.3
1980	₱11,714	A	18.9	= 18.9
		B	22.2	= 22.2
		C	17.1	= 17.1
		D	10.4 x 2715/3000	= 9.4
		Total		67.6

[13]The Gini Coefficient for 1972 calculated in the same manner as for 1960 (See endnote No. 10).

[14]Todaro, op cit., pp. 148-149.

[15]Appendix A — Table I and II.

[16]Text-Table 5; and Appendix A, Table III and VII.

[17]Appendix A, Table IV.

[18]Appendix A, Table III, GNP data: R.P., National Economic and Development Authority, *1982 Philippine Statistical Yearbook*, pp. 142-145.

[19]Appendix A — Table IV.

[20]Ibid.

[21]Appendix A, Tables V-a and V-b.

[22]Appendix A, Table VIII-a and VIII-b.

[23]Appendix A, Tables I, II and VII.

[24]The Gini coefficient for 1980 was calculated in the same manner as for 1960 (See endnote No. 10).

[25]Appendix A, Table VIII-b and VIII-c.

[26]Appendix A, Table III, VII GNP data: R.P., NEDA, 1982. *Philippine Statistical Yearbook,* pp. 142-145.

[27]Appendix A, Table IV.

[28]Appendix A, Table IV.

[29]Ibid.

[30]Appendix A, Table V-b and V-c.

[31]Sicat, op cit. pp. 337-338.

[32]Appendix A, Table VIII-b and VIII-c.

[33]The Gini coefficient for 1980 before and after taxation was calculated in the same manner as for 1972 (See endnote No. 10).

[34]The distributive effect of government expenditures on family income can also be calculated. This was explored by the National Tax Research Center in 1974 in a study entitled "A Study of the Incidence of Government Expenditures by Income Class, CY 1971" and printed in the Tax Monthly: 15 (6), June 1974. Depending on the assumption used, the study concluded that government expenditures in 1971 equalized income to the extent that it altered and in most cases lowered the Gini coefficient from .4407 to the range of .4579 to .3096. (Note: the Gini coefficient in this study is lower by approximately .05 presumably due to the understatement caused by estimating the Gini coefficient from formulas).

[35]World Bank, An Overview of World Development Report 1983, p. 3.

Appendix A.

Table I. Distribution of Families by Total Family Income Class
Numbers in Thousands

Family Income Class	*1960*		*1972*		*1980*	
	#	%	#	%	#	%
A	1,206	25.4%	929	14.4%	1,654	18.9%
B	1,471	31.0%	1,387	21.5%	1,943	22.2%
C	770	16.2%	1,135	17.6%	1,496	17.1%
D	502	10.6%	871	13.5%	910	10.4%
E	372	7.8%	942	14.6%	1,155	13.2%
F	153	3.2%	471	7.3%	656	7.5%
G	98	2.1%	264	4.1%	201	2.3%
H	126	2.7%	355	5.5%	551	6.3%
I	53	1.1%	97	1.5%	184	2.1%
TOTAL	4,751	100.0%	6,449	100.0%	8,750	100.0%

Source: 1960 Data — Taken from the 1960 Study.
1972 Data — The 1971 family income data contained in the 1982 Philippine Statistical Yearbook issued by National Economic and Development Authority (NEDA), pages 68-69, was extrapolated on the assumption that there was a continuation of the trend from 1960-1971.

1980 Data — Extracted from 3rd quarter 1980 data as reported by the National Census and Statistics Office (NCSO) and the NEDA in a special release No. 422 dated August 20, 1982.

Table II. Distribution of Total Family Income by Class
(Pesos in thousands)

Income Class	*1960*		*1972*		*1980*	
	₱	%	₱	%	₱	%
A	422,100	6.0%	674,575	2.5%	1,640,080	1.6%
B	1,082,656	15.5%	2,266,572	8.4%	6,252,805	6.1%
C	939,400	13.4%	2,968,130	11.0%	12,095,590	11.8%
D	855,910	12.2%	3,049,079	11.3%	9,737,975	9.5%
E	878,292	12.5%	4,533,144	16.8%	15,478,255	15.1%
F	516,069	7.4%	3,210,977	11.9%	11,685,570	11.4%
G	433,552	6.2%	2,320,538	8.6%	9,225,450	9.0%
H	832,127	11.9%	4,614,093	17.1%	19,578,455	19.1%
I	1,043,941	14.9%	3,345,892	12.4%	16,810,820	16.4%
TOTAL	7,004,047	100.0%	26,983,000	100.0%	102,505,000	100.0%

Sources: 1960 Data — Taken from the 1960 Study.

1972 Data — The 1971 data for percentage distribution and total family income was taken from the Bureau of Census and Statistics *Income and Expenditure Survey 1971.* Percentages distribution was extrapolated from 1971 on the assumption that there was the same trend in 1972 as during the 11-year period 1960-1971. Total of family income was extrapolated using 1971-1975 trend and allocating 20% of four year increase to first year to obtain 1972 figures. Peso amounts per category were calculated by multiplying percentage distribution by total amount.

1980 Data — Taken from NCSO Integrated Survey of Households Income Statistics: third quarter, 1980 and 1981 — Number 422 dated August 20, 1982; fourth quarter, 1980 and 1981 — Number 431 dated November 12, 1982. The percentage distribution was calculated to be the average percentage distribution for third and fourth quarters as reported by NEDA. Data on total family income is the sum of quarterly amounts reported for the third and fourth quarters plus sum of quarterly amounts for first and second quarters extrapolated on the assumption that there was same % increase in amounts as what occurred in 1979 for which full year data was available from the NCSO Integrated Survey of Households Income Statistics: first to fourth quarter, 1979 — Number 336 dated August 15, 1980. Peso amounts per category were calculated by multiplying percentage distribution by total amount.

Table III. Total Taxes Paid by Total Family Income Class
(Pesos in Thousands)

Income Class	P	%	P	%	P	%
A	97202	6.9%	123409	2.5%	602188	1.8%
B	202886	14.4%	338956	7.0%	1855548	5.6%
C	159720	11.3%	437602	9.0%	3397503	10.2%
D	148194	10.5%	456945	9.4%	2792327	8.4%
E	162980	11.5%	721770	14.8%	4715256	14.2%
F	93927	6.6%	501274	10.3%	3533759	10.6%
G	73217	5.2%	340472	7.0%	2612570	7.8%
H	125025	8.8%	598075	12.3%	4730264	14.2%
I	349703	24.8%	1358277	27.9%	9047935	27.2%
TOTAL	1412854	100.0%	4876780	100.0%	33287350	100.0%

Sources: 1960 Data — Taken from the 1960 Study.

1972 and 1980 Data — These amounts and percentages were calculated using the methodology as explained in Appendix B. The source data for taxes per category was taken from the "National Government Tax Collection By Type of Tax, CY 1965-80," which was prepared for Dr. Agustin Kintanar, Jr., Feburary 1, 1982.

Table IV. Tax Burden by Total Family Income Class
(As a percentage of total family income)

Income Class	*1960*	*1972*	*1980*
A	23.0%	18.3%	36.7%
B	18.7%	15.0%	29.7%
C	17.0%	14.7%	28.1%
D	17.3%	15.0%	28.7%
E	18.6%	15.9%	30.5%
F	18.2%	15.6%	30.2%
G	16.9%	14.7%	28.3%
H	15.0%	13.0%	24.2%
I	33.5%	40.6%	53.8%

Sources: 1960 Data — Data taken from 1960 Study.
1972 and
1980 Data — These percentages were calculated by dividing total taxes paid by each family income class (Table III) by the corresponding amount of total family income by class (Table II).

Table V--a. 1960 Tax Distribution by Classification and Total Family Income
(Pesos in Thousands)

Income Class	*Income Tax*	*Corporate Tax*	*Residence Tax*	*Social Security*	*Motor & Transfer*	*Subtotal Direct*
A	1583	5294	610	0	0	7487
B	3215	10749	7946	0	0	21910
B	2297	7679	6695	10602	0	27273
D	2074	6934	6430	9661	0	25099
E	2313	7196	7567	9912	0	26988
F	1278	3955	5354	5826	0	16413
G	1040	3210	3944	4894	0	13088
H	3211	4989	7757	7405	4864	28226
I	87758	110750	6342	2442	14816	222108
TOTAL	104769	160756	52645	50742	19680	388592
Percent	7.4%	11.4%	3.7%	3.6%	1.4%	27.5

continuation of Table V-a:

	Commodity &Business	*Sales & Percent*	*Import Duties*	*Other Taxes*	*Total Indirect*	*Total Revenue*	*Per-Cent*
A	26584	16394	39692	7045	89715	97202	6.9%
B	51107	34794	82109	12966	180976	202886	14.4%
C	38330	26177	58899	9041	132447	159720	11.3%
D	35859	24766	53962	8508	123095	148194	10.5%
E	44231	25546	56518	9697	135992	162980	11.5%
F	25472	17197	29943	4902	77514	93927	6.6%
G	18275	13411	24374	4069	60129	73217	5.2%
H	31066	20316	39139	6278	96799	125025	8.8%
I	14994	28669	72371	11561	127595	349703	24.8%
TOTAL	285918	207270	457007	74067	1024262	1412854	100.0%
Percent	20.2%	14.7%	32.3%	5.2%	72.5%	100.0%	

Source: Data taken from the 1960 Study.

Table V-b. 1972 Tax Distribution by Classification and Total Family Income Class (In Thousand Pesos)

Income Class	*Income Tax*	*Corporate Tax*	*Residence Tax*	*Social Security*	*Motor & Transfer*	*Subtotal Direct*
A	3691	13548	979	0	0	18218
B	9821	36043	16701	0	0	62565
C	10589	38859	21235	62816	0	133499
D	10777	39552	22989	64522	0	137840
E	17414	59473	39198	95918	0	212003
F	11600	39406	33437	67967	0	152410
G	8120	27511	21186	49112	0	105929
H	25974	44300	43173	76989	19260	209696
I	410314	568408	20402	14676	33910	1047710
TOTAL	508300	867100	219300	432000	53170	2079870
Percent	10.4%	17.8%	4.5%	8.9%	1.1%	42.6%

Continuation of Table v-b

	Commodity & Business	*Sales & Percent*	*Import Duties*	*Other Taxes*	*Total Indirect*	*Total Revenue*	*Per-Cent*
A	25547	20636	41246	17762	105191	123409	2.5%
B	64357	57391	111807	42836	276391	338956	7.0%
C	72839	65158	121031	45075	304103	437602	9.0%
D	76812	69488	124993	47812	319105	456945	9.4%
E	137277	103852	189681	78957	509767	721770	14.8%
F	95309	84282	121151	48120	348864	501274	10.3%
G	58818	56538	84830	34357	234543	340472	7.0%
H	103592	88736	141128	54923	388379	598075	12.3%
I	28899	72377	150833	58458	310567	1358277	27.9%
TOTAL	663450	618460	1086700	428300	2796910	4876780	100.0%
Percent	13.6%	12.7%	22.3%	8.8%	57.4%	100.0%	

Source: Same source as Table III.

Table V-c. 1980 Tax Distribution by Classification and Total Family Income class (In Thousand Pesos)

Income Class	*Income Tax*	*Corporate Tax*	*Residence Tax*	*Social Security*	*Motor & Transfer*	*Subtotal Direct*
A	12201	28024	3290	0	0	43515
B	36822	84562	63704	0	0	185088
C	58655	134693	119674	360597	0	673619
D	46795	107466	101556	290338	0	546155
E	80839	172754	185128	461419	0	900140
F	57390	121994	168299	348465	0	696148
G	43888	93050	116508	275086	0	528532
H	149826	159903	253366	460220	51501	1074816
I	2802584	2429454	141775	103875	107369	5585057
TOTAL	3289000	3331900	1153300	2300000	158870	10233070
Percent	9.9%	10.0%	3.5%	6.9%	0.5%	30.7%

Continuation of Table v-c

	Commodity & Business	*Sales & Percent*	*Import Duties*	*Other Taxes*	*Total Indirect*	*Total Revenue*	*Per-Cent*
A	121810	157641	181467	97755	558673	602188	1.8%
B	348012	497206	557871	267371	1670460	1855548	5.6%
C	581944	834030	892237	415673	2723884	3397503	10.2%
D	481047	697212	722283	345630	2246172	2792327	8.4%
E	919110	1113996	1171812	610198	3815116	4715256	14.2%
F	680077	963536	797664	396334	2837611	3533759	10.6%
G	458532	706145	610195	309166	2084038	2612570	7.8%
H	861850	1182781	1083392	527425	3655448	4730264	14.2%
I	284698	114353	1371079	664748	3462878	9047935	27.2%
TOTAL	4737080	7294900	7388000	3634300	23054280	33287350	100.0%
Percent	14.2%	21.9%	22.2%	10.9%	69.3%	100.0%	

Source: Same source as Table III.

Table V I. Definition of Income Classes
(Total family income in Pesos per annum)

Income Class	*Range 1960*	*Range 1972*	*Range 1980*
A	⟨500	⟨1000	⟨3000
B	500-999	1000-1999	3000-5999
C	1000-1499	2000-2999	6000-8999
D	1500-1999	3000-3999	9000-11999
E	2000-2999	4000-5999	12000-17999
F	3000-3999	6000-7999	18000-23999
G	4000-4999	8000-9999	24000-29999
H	5000-9999	10000-19999	30000-59999
I	10000+	20000+	60000+

Note: The 1960 ranges were redefined by the author by combining some of the 1960 study categories. The number of calculations was reduced as the income categories became lesser.

The 1972 and 1980 ranges were defined by multiplying the 1960 range by factors 2 and 6, respectively. These were the approximate inflation factors for the period (See Table VII).

Table VII. Inflation Rates
(% per annum for all of Philippines)

Year	*Annual*	*Cumulative*	*Year*	*Annual*	*Cumulative*
1960		1	1972		1
1961	3.0%	1.03	1973	16.5%	1.17
1962	3.0%	1.06	1974	34.2%	1.56
1963	3.0%	1.09	1975	6.8%	1.67
1964	3.0%	1.13	1976	9.2%	1.82
1965	3.2%	1.16	1977	9.9%	2.5
1966	4.8%	1.22	1978	7.3%	2.15
1967	5.5%	1.28	1979	16.5%	2.5
1968	2.2%	1.31	1980	17.6%	2.95
1969	1.4%	1.33			
1970	14.8%	1.53			
1971	21.8%	1.86			
1972	8.2%	2.01			

Sources: 1961-1964 Data — Guesstimate by the author due to lack of reference materials during the time calculations were made.

1965-1980 Data — Taken from Inflation Rate for all of the Philippines as contained in *Philippine Statistical Yearbook 1975 and 1982*, page 103.

Table VIII-a. 1960 Income Distribution for 20, 50, 90 Percent Income Groups

Income Group	Per Income Group		Cumulative	
	% of Income Before Tax	% of Income After Tax	% of Income Before Tax	% of Income After Tax
⟨20%	3.7	3.6	3.7	3.6
20%-⟨50%	13.3	13.3	17.0	16.9
50%- 90%	40.6	41.9	57.6	58.8
⟩90%	42.4	41.2		

Source: Data taken from the 1960 study as recalculated.

Table VIII-b. 1972 Income Distribution for 20, 50, 90 Percent Income Groups

Income Group	Per Income Group		Cumulative	
	% of Income Before Tax	% of Income After Tax	% of Income Before Tax	% of Income After Tax
⟨20%	3.6	3.7	3.6	3.7
20%-⟨50%	15.5	16.1	19.1	19.8
50%- 90%	44.6	45.9	63.7	65.7
⟩90 %	36.3	34.3		

Source: Data was calculated using applicable figures (Tables I to VII).

Table VIII-c. 1980 Income Distribution for 20, 50, 90 Percent Income Groups

Income Group	Per Income Group		Cumulative	
	% of Income Before Tax	% of Income After Tax	% of Income Before Tax	% of Income After Tax
⟨20%	1.7	1.6	1.7	1.7
20%-⟨50%	11.0	11.7	12.7	13.3
50%- 90%	45.1	46.9	57.8	60.2
⟩10%	42.2	39.8		

Table VIII-d. 1980 Income Distribution for 20, 50, 90 Percent Income Groups: Impact of Taxes

Income Group	Per Income Group			
	% of Income Before Tax	% of Income After Tax	% of Income After Tax (Direct)	% of Income After Tax (Indirect)
⟨20%	1.7	1.6	1.8	1.5
20%-⟨50%	11.0	11.7	11.8	10.8
50%- 90%	45.1	46.9	47.2	44.2
⟩10%	42.2	39.8	39.2	43.5

Source: Data was calculated using applicable figures from Tables I to VII.

Appendix B

The Calculations of the Study

Data of the 1960 study were summarized as follows:

1. The thirteen categories for total family income used in the 1960 study were reduced to nine to simplify calculations.

2. Total family income for each of the nine categories was determined.

3. Total tax paid by type for each of the categories was determined.

Similar data were computed for 1972 and 1980 as follows:

1. The 9 total family income categories were redefined by multiplying them by a factor of 2 and 6 for 1972 and 1980, respectively. These factors approximated the actual of 2.013 and 5.93 for these periods price index compared to 1960 as measured by the consumer price index for all of the Philippines.

2. Total family income earned for each category was obtained from the National Census and Statistics Office as follows:

a. For 1972: 1971 data were used and projected to 1972 assuming a continuation of the trend 1960-1972. Whenever income classes reported by NCSO were different than defined, interpolating and extrapolations were used.

b. For 1980: Only total family income for the last two quarters was available. The first two quarters were estimated by assuming a similar growth trend between quarters 1 and 2 and 3 and 4 as in 1979 for which data were available for each quarter.

3. Total tax by type for 1972 and 1980 was available from a special study performed under the supervision of Dr. Kintanar. Each type of tax was allocated among the 9 total family income categories based on increases in total family income since 1960 and assuming there was an identical tax burden. Any difference was then allocated proportionally. The distribution for each type of tax per category was then summed up to give the total tax per family income class.

This hypothetical example should show the calculations of the distribution among the categories A, B and C. Assume that in 1960 total family income and total taxes paid for one type of tax were as follows:

Category	Total Family Income	Total Tax
A	P 4	P 1
B	P 6	P 2
C	P10	P 3

In 1972 total income for categories A, B and C was 15, 25 and 40 and total tax for all three categories was 30.

Then the calculation for the 1972 distribution is:

15/ 4 x 1 =	3.75	x 30/24.08 =	4.67
25/ 6 x 2 =	8.33	x 30/24.08 =	10.38
40/10 x 3 =	12.00	x 30/24.08 =	14.95
	24.08		30.00

Appendix C

The Validity of Data

Limitations of Data

The study used primary data from many sources and correlated these to arrive at the numerous conclusions. However, the data used have the following limitations and their results, therefore, should be carefully interpreted.

1. Data have been gathered either directly or indirectly from various government sources and are, therefore, subject to the accuracy of the reported figures.

2. The data and calculations were arrived at after making a number of assumptions. Each assumption could affect the validity of the data.

3. The 1960 Study adjusted for understatements of income of the lowest, second lowest and highest income groups. Since the methodology was not disclosed, no such adjustments were made in either 1972 or 1980.

4. The assumptions used to allocate taxes among the various income groups in 1960 were left unaltered for the 1972 and 1980 data. Although the rationale used in 1960 appears to be logical twenty years later, this has not been validated by an expenditure study.

5. The sources for tax data in 1960 were different than for 1972 and 1980. During the twenty-year period certain taxes have been re-classified and sources differ in their concept of which revenues to include and under what categories if at all.

6. All income categories have been adjusted equally for inflation using the general consumer price index for the whole country. Yet, in reality each income group would have a different inflation factor. For example, the NCSO has published a different consumer price index for the poor in Manila. In Table 5, Briones used the Manila inflation rate to calculate the constant prices for expenditures while the constant prices for revenues were based on data of this study which used the general consumer price index for the whole country.

7. The 1960 data related to ₱1.4 Billion of tax revenue. In 1980, revenues amounted to P33.33 Billion. The almost 24 fold increase (4 times in inflation-adjusted terms) will make some of the comparisons invalid.

8. The decrease in the size of the family and the degree of urbanization over the twenty-year period make it more difficult to compare various income classes.

9. Statistics used were incomplete and required further interpolation to be consistent with income categories. This may have introduced inaccuracies. For example, due to lack of data at the outset, the rates of inflation for 1961 to 1964 inclusive were estimated at 3% per annum although in fact the rates were 4.3%. 3.3%, 8.1% and 8.8%.

10. Much of the government data used for 1980 was preliminary and, therefore, subject to refinements.

Validation of Data

After reaching the conclusions in this paper, some faculty members of the UP College of Public Administration (CPA) pointed the author to relevant studies that had used similar data. These studies were examined to validate the findings of this paper. The conclusions are briefly stated together with exceptions noted.

A. 1971 Study of the National Tax Research Center. The NTRC study using 1971 data duplicated the 1960 study using a similar methodology as in this paper. The study, however, also accounted for family expenditure patterns based on data from the Bureau of Census and Statistics. The conclusions in the 1971 study were remarkably similar to those reached in this paper. The 1971 study also concluded that the tax policies during the 1960-1971 periods had not been effective in attaining a more equitable distribution of income. Like this paper, the 1971 study considered the Martial law era as a period to make improvements and it urged an update of the 1960 study using 1975 data.

The study differed, however, on some of the quantitative figures. These, however, did not result in different conclusions from this study mainly because the conclusions are based on extensive not marginal deficiencies in the tax system. Nevertheless, they are worth noting.

(1) Data for total income were identical but data on tax revenue were recorded as ₱5,303 million versus ₱4,409 million that would have been used in this study had 1971 data been considered. As a result, a tax burden of 22.4% or 2.2 percentage points higher than in 1960 was believed to have existed in 1971. This was 4.3 percentage points higher than in this study. Consequently, the sections on the Adequacy of Taxation and the Burden of Taxation must be read with care. The tax data used in this study were obtained from a research study done for Dr. Agustin Kintanar, UP-CPA, in early 1982. Until the differences are explained the tax data can only be used with care and if the possible inaccuracies are pointed out.

(2) The redistributive aspect of taxation among the 20, 50 and 90% cumulative income groups and the top 10% of the families is almost identical except for the lowest 20% income group which according to the 1971 study redistributes one percentage point of their total income to their other classes. This compares to .1% in 1960 and a .1% gain in this study. This large redistribution is not explained in the narrative and is somewhat unlikely. The conclusion, however, that the impact of taxation on distribution of income is minimal remains valid for both papers.

(3) The tax burden in the 1971 study, as already observed, is 4.3 percentage points higher than for this study. For the income categories between ₱1000 to ₱10,000 the tax burden curves are almost identical except for the 4.3 percentage points difference. For the families earning below ₱1000 the 1971 study shows a steeply rising tax burden reaching over 60% for the families with almost no income. It is unlikely that the tax system deviated that much from the 1960 structure, neither does a 60% tax burden rate appear realistic. Probably, this has resulted from some invalid assumptions in the 1971 study. The observation in number two above appears to result from the same erroneous assumption. For the Income Class over ₱10,000, the 1971 study shows an increasing tax burden for families earning up to ₱15,000 and then a decreasing rate. This study shows the reverse particularly on decreasing tax burden up to the ₱15,000 family income group and a steeply increasing rate thereafter. The fact that the 1971 study took into account the different consumption patterns and the difference of almost 1 Billion pesos in revenue may be responsible for the different results. Unless these differences are resolved, the conclusions about the low tax burden of the penultimate income group earning between ₱30,000 to ₱60,000 per annum in 1980 (₱10,000 — ₱20,000 in 1960) should be read with care.

B. *Income Distribution for the 20, 50, 90 Percent Income Groups.* The National Census and Statistics Office publishes income distribution data for each quintile income group and the top 10 and 5% income groups. Therefore, the lowest 20% income group and the top 10% income group could be compared to similar data calculated in this paper.

The two sets of data are:

	NCSO		This Study	
Income Groups	1961	1971	1960	1972
lowest 20%	4.2	3.7	3.7	3.6
highest 10%	41.0	37.1	42.2	36.3

From these data, it may be concluded that the author was wrong to recalculate the income distribution data for 1960 despite the fact that the data on the redistributive effect of taxation become more plausible. On the

other hand, the 1971 data of NCSO are almost identical with the author's 1972 data. Also, the conclusion that there was a more equitable income distribution in the early seventies compared to the sixties is confirmed.

C. *Accuracy of Income Distribution Data Reported by NCSO.* Mahar Mangahas has written a number of discussion papers between 1975 and 1981 wherein he questions the accuracy of the family income and expenditure data of the National Census and Statistics Office (NCSO). These data, of course, are the primary data used in this study as they relate to decreasing poverty through increased earnings and to income distribution. He concludes that actual realities may be the opposite to what NCSO figures show for the period 1961-1971. He also concludes that data for the period thereafter have deteriorated so much that no conclusions can be drawn from them. Data of this study must be evaluated with these findings in mind.

To quote some of Mangahas' conclusions from the 1979 paper entitled "On How To Measure Poverty":

> Poverty in the Philippines probably worsened during 1961-1971. (page 13)
>
> One cannot shrug off these confusing findings (The fact that his data and sources showed poverty had increased between 1961 and 1971 while NCSO data revealed poverty decreased) with facile remark that different assumptions give different conclusions. The choice among assumptions can not be entirely subjective and arbitrary . . . such material is ready-made for apologists of the political regime. (page 85)
>
> One cannot tell whether conditions worsened or improved over 1971 to 1975 because the official distributional monitoring system broke down in 1975. (page 13)

Implications to this Study

Data relating to the distributional impact of taxation have been validated for 1960-1972. Therefore, this gives an increased credibility to the 1980 data. Income distribution data, on the other hand, have been seriously questioned. For instance, it cannot be categorically stated whether the number of poor has increased or decreased. Therefore, the results of this study must be read with that in mind. If anything, this re-emphasizes the need for better and up-to-date information which was identified in the conclusion of the paper. Only with better and more accurate data can the effectiveness of national development and the role of taxation therein be meaningfully evaluated.

Appendix D

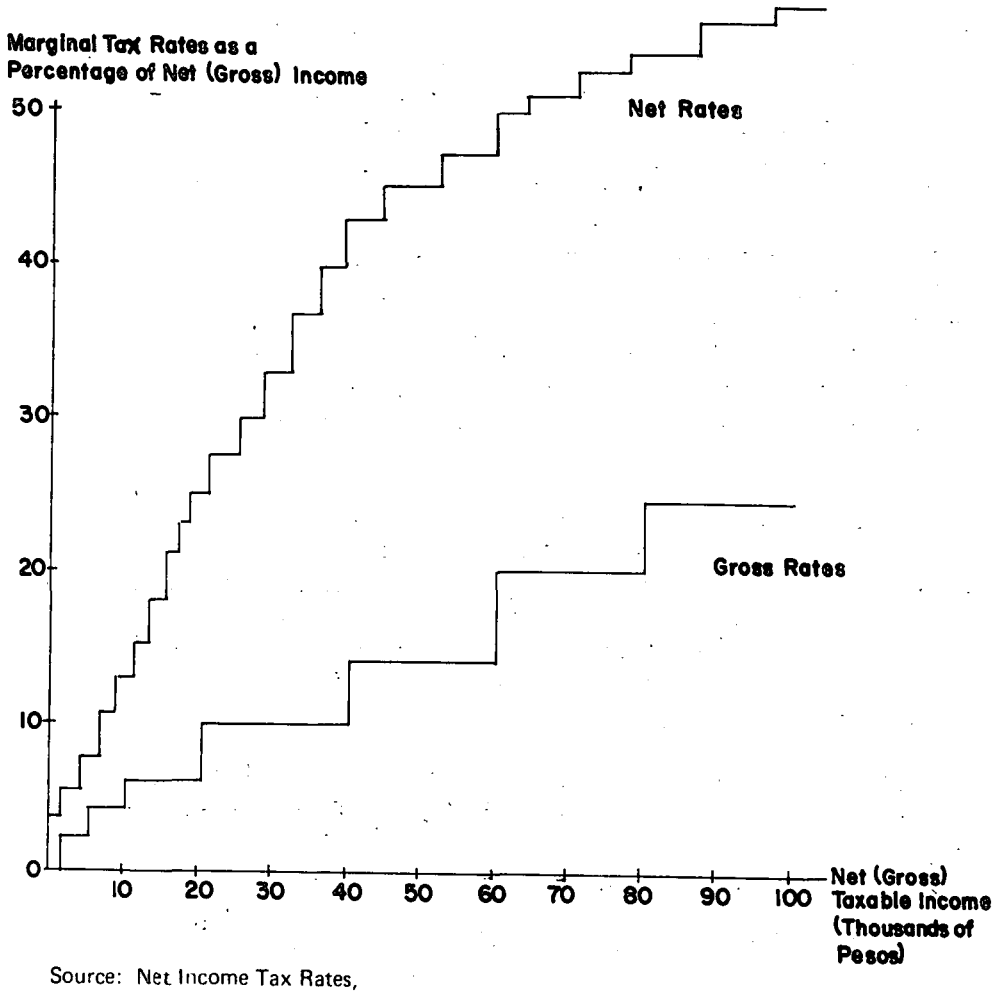
The Gross Income Tax System

The personal income tax system which was in effect until 1981 was a progressive tax system based on total income less allowable expenses. In 1980, it raised ₱3.3 Billion or 9.9% of total revenue. Of this amount, 85% was paid by the highest income class earning over ₱60,000 and 4.6% by the next highest income class earning between ₱30,000-₱59,999. This was replaced in 1982 by a gross income tax system which was also progressive but which reduced the allowable deductions of expenses against taxable income. The change in the concept was founded on the argument that it was simpler to administer and that it would close many loopholes and thereby increase the base to which to apply taxes. This in turn would somehow enable government to increase total intake. The marginal rates for both the net income tax structure and the gross income tax structure are shown in Figure 11 for income ranging from ₱0—₱100,000 per annum. These rates are applicable after deductions which include a deduction of ₱6000 for a married taxpayer plus a deduction for the first four dependents of ₱2000 each.

The effect on the adequacy of tax revenue of the gross income tax system will depend mainly on whether the system will raise additional taxes or not. The 1982 and 1983 data on this are still inconclusive. The effect on the regressiveness of taxation and the burden of taxation on the lower income groups are expected to be minimal because the gross income tax like its predecessor is a tax which is almost exclusively paid by the two highest income groups.

The gross income tax, however, could be used to reduce the low tax burden of the income group earning between ₱30,000-₱59,999 per annum simply by increasing the tax on income earned between ₱30,000 and ₱59,999 to a higher percentage; for example, such as is charged for income earned between ₱60,000 and ₱10,000. This would mainly affect the ₱30,000 to ₱59,999 income group. This is so because many families with income below ₱30,000 do not file tax returns considering that personal deductions total over ₱10,000.

Figure II. Marginal Tax Rates of Previous and Current Personal Income Tax (% of Tax)



Source: Net Income Tax Rates,
Angel Q. Yoingco and Vicente G. Quintos, *Philippine Tax System Under the New Society*, pp. 35-36

Gross Income Tax Rates,
Leonor Magtolis Briones, *Philippine Public Fiscal Administration* (Manila: Commission on Audit Research and Development Foundation, 1983), p. 124