

# THE SIZE DISTRIBUTION OF INCOME IN LIBERIA

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The economy of Liberia is one in which, in spite of past satisfactory growth performance, a high level of income inequality persists. In 1977, for instance, a mere 2 percent of the people accounted for some 33 percent of nation-wide wage income. These people live disproportionately in Montserrado County in which the capital city is located. While each of the other counties are largely rural and poor, each has far lower intra-county inequality than wealthy Montserrado.

Intersectoral location of the income-earner, average income levels and the extent of access to human capital formation opportunities are some characteristics of the economy that have been found to explain significant portions of intercounty variations in the levels of household income concentration. Income inequality is reduced with increases in the extent of agricultural activity as the share of the top income group falls and that of the bottom group rises. The reverse happens with growing urban-area activity. Higher income concentration occurs with rising per capita incomes as the top group's income share rises and the bottom income group's share falls. While this appears to be an instance of the Kuznet U-shaped hypothesis, here there are no definite signs of a possible reversal any time soon. The levels of access to educational facilities move inversely with the level of inequality, with expanding elementary facilities benefiting the poorer people at the expense of the wealthy while the reverse happens in the case of expanding secondary educational facilities.

## INTRODUCTION

Following the realization that development economics research and its practice before the seventies have erred by disproportionately emphasizing aggregate growth to the relative neglect of distribution, much research effort has been directed at examining the distribution phenomenon. Economists have been trying, where the data permit, to investigate the extent of income inequality that exists in particular countries and, even in the absence of satisfactory theories of distribution, to determine how these relate to various characteristics of the economies. These studies are aimed at leading the profession towards a clearer understanding of the various facets of the distribution issue as well as providing practitioners with some substance to guide policy decision making. This paper on the size distribution of income in Liberia is a case study in the same vein.

The case of Liberia is interesting because the economy is one which, despite above average growth performance in the Development Decade, still has what has been described as "sharper inequality than probably exists in comparable countries."<sup>1</sup> It is a case that is worth examining for yet another reason. The economy has such a magnitude of the closely-related problem of rural poverty as to merit inclusion in the group of countries selected by the Task Force on Rural Development of the United Nations Administrative Committee on Co-ordination for in-depth study and preparation for an experiment in integrated rural development.

The paper is arranged in four sections. Section I describes the data and the data sources. The second section discusses the extent of inequality in sizes of

<sup>1</sup>Shoup, C. *et al.*, *The Tax System of Liberia*, Columbia University Press, New York, 1970, p. 10.

household and personal incomes at the national level, by regions and by sectors. Section III examines the determinants of the unevenness in the distribution of incomes among households and the fourth summarizes and concludes the study. The results of the empirical work appear in an appendix.

## I. THE DATA

The data came from two sources of which the 1974 Liberian Census of Population and Housing was the major (but unpublished). Included in the questionnaire for the census was a question on the size of household incomes. The enumerators were instructed to obtain information on the "monthly cash income" of each household but with incomes defined to encompass earnings from all sources including self-employment.

Owing to the relative size and importance of the traditional economy it is necessary to determine whether the results obtained reckoned the typical household's own consumed output as part of its income. This has been done elsewhere. Desai (1977) compared average household incomes in agricultural areas reported in the census with estimated household incomes based on total production as derived from the National Rice Production Estimates of 1974. The census showed that the average household monthly income nationwide would be about \$63 but some 202,455 households had monthly incomes of under \$25. The bulk of the latter would be households engaged in traditional agriculture. The National Rice Production Estimates revealed an average household income of \$32. Since only about a quarter of the rice-growing households actually sold rice, all households could not have monthly cash incomes of \$32. He then surmised that the incomes reported in the census must be total cash and non-cash income.

The data released after the tabulation of the census returns used samples of size averaging 20 percent of the population of each county. In order to be able to combine parts with nation-wide survey data these were "blown-up" by this author to yield information on a total of 1.3 million people or nearly 90 percent of the population of 1974.

The other data source was a survey conducted by the author in July 1977, covering some 75,400 people employed in the modern sector of the economy.

The data from the Census group households in nine income classes, the first and last of which are open-ended. The first class covers incomes of \$600 per annum and below and the last class begins at an income of \$4,800 per annum. Owing to some probable understatement of incomes, particularly in the highest class, total personal income accounted for in the 1974 Census data would be around 70 percent of personal income from the national income accounts of 1974.<sup>2</sup>

The survey data provide information on the modern wage-income sector exclusively and such information may be merged with that on the traditional

<sup>2</sup>Out of a total GDP (factor cost) of \$570.3 million for 1974, Corporation Income Tax was \$27.4 million (iron ore profit sharing included), Net Factor Payments Abroad was \$120 million. After allowing for Depreciation and Business Retained Earnings, Personal Income would probably be around \$300 million.

sector (coinciding largely with households with incomes of \$600 per annum and below in the Census data) to derive a more reliable distributional pattern among all wage-income (or labour-income) earners. This was done in order to strengthen the data and by so doing to obtain a picture of the degree of inequality that would be as near-complete as possible, even if it pertains to only the distribution of wage-income among persons. The survey data also provided information on the distribution by economic sectors—primary, secondary and tertiary. For analysing determinants, we had to fall back on cross-sectional data from the Census records.

## II. THE EXTENT OF INEQUALITY

The degree of income inequality found in Liberia easily rivals those of countries found to possess the highest degree of inequality in the World Bank Study of 1974.<sup>3</sup> In the interpersonal distribution the Census data show that the top 20 percent of income earners receive 50 percent of total income, the middle 40 percent receive 38 percent and the bottom 40 percent account for only 12 percent of the incomes. The distribution is worse still among households, where the proportions become 52 percent for the top 20 percent, 38 percent for the middle 40 percent and a mere 10 percent for the bottom 20 percent. The overall Gini concentration ratios are 0.411 for persons and 0.422 for households. (When the survey data are introduced as discussed above, the top 2 percent of population accounts for 33 percent of incomes and the Gini ratio for distribution among persons rises to 0.452.)<sup>4</sup>

These inequality indicators are heavily influenced by conditions in Montserrado County where the capital of Monrovia is situated. With some 26 percent of the national population, the county has about the same degree of interpersonal inequality as the nation at large but much higher inequality among households than exists at the national level. These conditions are reflected in the county's Gini concentration ratios: 0.417 for distribution among persons and 0.467 for the distribution among households.

All the other counties differ from Montserrado in structure. They all have comparatively larger subsistence sectors and correspondingly smaller segments of the usual money-based activity centering around mining and/or forestry, cash cropping and the services. Each also has lower income inequality than exists either in Montserrado or at the national level. The Gini concentration ratios lie, in the case of persons, between 0.308 and 0.382 and, in the case of households, between 0.330 and 0.388. One thing they have in common with Montserrado, though, is the predominance of higher interhousehold inequalities than interpersonal. That is the case in six out of the eight other counties—and the higher the

<sup>3</sup>Chenery, H. *et al.*, *Growth With Redistribution*, Oxford University Press, London, 1974. These are countries in which the income share of the lowest 40 percent is less than 12 percent. See pages 8 to 9 of the above text.

<sup>4</sup>The relative shares for the top 20 percent, middle 40 percent and bottom 40 percent were read off free-hand Lorenz Curves drawn from the data so as to obtain the approximate distribution according to the traditional cut-off points. But skewness is actually more severe. The fact that the top 2 percent account for 33 percent of even labour incomes (usually considered less prone to high inequality in distribution) is more indicative of the true degree of unevenness in distribution.

*percapita* income level the greater the margin by which interhousehold Ginis exceed interpersonal ones.

While each of the counties differs substantially from Montserrado, they are, among themselves, so similar that their respective intracounty inequalities exceed the overall intercounty inequality among the eight of them. In contrast to the intracounty inequality indices (Gini) in excess of 0.30, the Gini ratio for intercounty inequality is 0.024 for interpersonal distribution and 0.028 for interhousehold distribution. When Montserrado is included its dominance becomes evident; with 30 percent of the households and 26 percent of the population accounting for about 41 percent of the incomes, that county makes for higher interpersonal inequality (Gini 0.158) than interhousehold inequality (Gini 0.124).

These regional differences are reflections of underlying economic-sectoral differences. The broader primary sector, consisting of traditional agriculture, modern-sector agriculture, logging, and mining embraces 1.33 million people and has the lowest income inequality of any sector (Gini 0.195). This reflects the dominance of the traditional (subsistence) segment of the broader primary sector with the bulk of the people (some 75 percent of the population). When the traditional (subsistence) segment is excluded, the inequality in the modern primary sector is seen to be far higher (Gini 0.477).

The secondary sector (manufacturing) has about the same degree of inequality as exists in the modern primary sector (Gini 0.480). The tertiary sector has, as would be expected, the highest degree of inequality among the sectors (Gini 0.548).

### III. DETERMINANTS OF INEQUALITY

Income inequality derives from inequality in the ownership of income-generating assets and/or inequality in the earning power of the assets. The distribution of the ownership of assets and the market valuation of the services of the assets are, in their turn, influenced by several factors. Three important ones are (a) the intersectoral location of the income earner, (b) the rate of growth of the economy and the structural changes that occur during growth and (c) the distribution of additional assets created as the economy moves through time.

The influence of intersectoral location of income earners on inequality operates through differences among sectors in the distribution of assets among people and the pricing of the services of those assets. The distribution of income may change when the growth process alters the distribution of the ownership of assets through the allocation of new assets created. Growth may also affect the distribution of income-earning opportunities as various sectors expand at different rates. The market valuation of the services of various assets may also change in the growth process when shifts occur in the demand for and supply of the services of particular assets.

The distribution of access to opportunities for creating new income-earning assets through which the growth factor may operate has interesting implications for the degree of income inequality when the assets in question are the intangible

kind. Of great significance in this connection for a relatively youthful population<sup>5</sup> is access to opportunities for the creation of human capital.

The empirical work employed regression analysis. Using cross-sectional data, we investigated the extent to which inequality in Liberia has been conditioned by these factors. In particular, we investigated how far intercounty household income inequality can be accounted for in terms of sectoral location (agriculture and nonagriculture), growth and access to human asset-formation opportunities.

#### a. *Sectoral Location*

##### (i) *Agriculture*

Fully three out of every four working Liberians are in agriculture and about 83 percent of the agricultural workers are in the traditional sector, producing mainly for subsistence. Except for Montserrado County which has just over a fifth, each county has better than half its population engaged in agriculture.

The dominance of the traditional sector of the economy with the associated prevalence of family holdings and simple cultivation practices means that there is far less concentration in the ownership of assets in agriculture than in non-agricultural activities. The degree of income concentration would therefore be expected to be fairly low in agriculture and until major structural changes occur to raise the concentration in the distribution of the ownership of assets income inequality would be expected to decrease with the expansion of agriculture. The extent of agricultural activity may be measured in various ways. Here, we used one that emphasizes the distribution issue: the percentage of population engaged in agriculture.

The empirical results conform with expectations. As the numbers engaged in agriculture increase both the Gini coefficient and the income share of the top income group<sup>6</sup> decline and the income share of the bottom group rises. While the relationship between the Gini ratio and the share of the bottom income group one hand and the extent of agricultural activity on the other is linear, the influence of the spread of agricultural activity on the income share of the top group on the one hand and the extent of agricultural activity on the other is linear, the influence of the spread of agricultural activity on the income share of the top group is, however, faintly U-quadratic. This shows that the reduction of the income share of the top group as agricultural activity expands will slow with time but it will not be at the expense of the bottom group.

An interesting issue in the context of the effect of expansion of agriculture on income inequality is the relevance of the crop mix. In Liberia, rice is the crop that is most widely cultivated. Of the agricultural households in each county

<sup>5</sup>Forty percent of the population is under 15 years of age.

<sup>6</sup>Owing to extreme skewness income that accrues to what is the top income group goes to a far smaller proportion (averaging 3 percent) and that going to what is the bottom group accrues to a far larger percentage (averaging 59 percent) than in conventional usage. Hence in the empirical work, top income group refers to top 3 percent, middle income group refers to middle 38 percent and bottom group refers to the poorest 59 percent.

an average of about 89 percent in each case grows rice. Smaller percentages, ranging between 2 and 46 percent, cultivate other crops like coffee and cocoa. It is the spread of rice culture that mainly accounts for the reduction in income concentration via trade-off of income shares between the top and the bottom income groups. The spread in the cultivation of cocoa and coffee possesses the potential but has not yet begun exerting a significant influence towards reducing income inequality.

(ii) Non-agriculture

Given the extent of economic dualism, non-agricultural activities go on mainly in the urban areas. These encompass some modern-sector primary activity but mainly secondary and tertiary sector activities. In these activities the ownership distribution of both tangible and intangible assets would be more unequal than is the case in agriculture. The distribution of income would be expected to be more unequal in these activities with the degree of inequality increasing with expansion of those activities.

In the empirical work, the urban-area population proportion was used as a proxy for the extent of non-agricultural activity. The results show that expansion in the intercounty urban-area populations exacerbates the extent of income inequality. The Gini concentration ratio rises with the proportion of population that is urbanised and so does the income share of the top group. At the same time, the income share of the poorest group declines as urbanisation proceeds. The phenomenon of rural-urban drift of the population with resulting growth in the pool of the urban unemployed is most probably a contributing factor.

b. *Growth*

An obvious way by which a change could occur in the extent of concentration in income distribution would be through changing distributional patterns of new wealth. When distributional patterns remain unchanged and sectors grow in equal proportions the extent of inequality would remain unchanged. But a change in inequality would occur when distributional patterns remain unchanged while some sectors grow faster than others.

In the pursuit of a strict *laissez-faire* development strategy, the Liberian economy has not experienced any significant attempts to deliberately alter the distributional patterns. Together with varying intersectoral growth rates, this means that inequality was changing over time but owing mainly to growth. The sectors that have led in growth are the modern primary, the secondary and the tertiary sectors. Since these are sectors in which there is more rather than less concentration in the distribution of income-earning assets, it would be expected that changing inequality would be in the direction of greater income concentration.

The empirical results support this view. Inequality tends to worsen with rising *per capita* incomes. The Gini concentration ratio rises with the *per capita* income level and so does the income share of the top group. The relation between the income share of the middle-level income group and the *per capita* income level is inverted U-shaped; as *per capita* income rises, their income share falls

but at a declining rate. In the case of the bottom income group, rising *per capita* income leads to a lowering of the income share.

c. *Access to Asset-Formation Opportunities*

(i) *Education*

Education is normally considered as a vehicle for enhancing the earning powers of labour. When the facilities exist and are open to all segments of the society, only the ability to invest the time and other resources needed to use the opportunities determines whether or not earning powers are improved. When there is greater ability and willingness to use the facilities the effect on raising earning powers is higher than otherwise. Policy-makers are generally able to influence availability more readily than the ability or willingness to use the facilities. Here we concentrate on the effect of the availability of educational opportunities on the extent of inequality.

Owing to the existence of costs (earnings foregone plus fee and cost of materials) which rise with time spent and the level of education, poorer households use and benefit more from lower-level educational facilities than upper level ones. One would therefore expect that elementary educational facilities would be more beneficial to the lowest income group, in particular, than to the higher income groups. The availability of the facilities has been measured as number of schools per thousand people.

The results conform with expectations. Overall inequality (as measured by the Gini coefficient) declines with elementary educational facilities and rises with those at the secondary level. But the influence of secondary education on the Gini ratio (in absolute terms) far exceeds that of elementary education.

The effect of the availability of the facilities on the income share of the top group replicates what happens in the case of the Gini ratio. The group's income share falls with expansion in elementary educational opportunities but rises with opportunities for secondary education. The effect (in absolute terms) with respect to secondary education exceeds that of elementary education.

The income share of the middle-level group appears to be invariant with respect to changes in educational opportunities, be they elementary or secondary. People at the bottom of the income scale, however, do gain from expansion in elementary schooling facilities but their income share is reduced with expansion in secondary educational opportunities. As in the case of the top income group, the effect of secondary schooling opportunities (in absolute terms) on the income share of the bottom group exceeds that of elementary education. The magnitudes of the coefficients suggest a trade-off in effect on income shares between the top group and the bottom group.

(ii) *Health*

Health affects income-earning opportunities through its effect on the physical ability to engage in income-earning activities. When health facilities exist to provide health care at a cost, wealthier people are better placed to take advantage of them than others. In the Liberian economy even the most basic of health care has, for the bulk of the population, never been entirely free and that means

people's income levels have implications for the level of health care they can enjoy.

The people in the top income group use private health care extensively and, *a priori*, one would expect that expanding access to public health care facilities would improve the income-earning capabilities of mainly the middle and bottom groups. It would also be expected that the poor, in particular, would experience returns which, relative to their position on the income scale have initially higher but declining marginal significance. That would lead initially to a reduction in overall inequality and in the income share of the top group and to increases in the income shares of the middle and bottom groups, with the changes slowing with time. Here, as with education, we concentrated on the effect of the access defined as the availability of facilities for which we use the proxy measure: the number of hospital beds per ten thousand people. The rationale for the use of that proxy lies in fact that the county with the best network of health care facilities also has the highest number of hospital beds and vice versa.

The empirical results were insignificant in all cases even though all the coefficients had the appropriate signs. The poor performance of the equations may be a reflection of the inappropriateness of the variable used to measure access to health facilities. It may also be that access to health care facilities has just not yet started exerting any significant influence on the extent of income inequality.

#### IV. SUMMARY AND CONCLUSION

There is very high and most probably rising inequality in the size distribution of incomes in Liberia. This is rooted in extreme regional and economic sectoral imbalances which directly and indirectly create uneven income-earning opportunities.

Of income accruing to labour nationwide in 1977 a mere 2 percent of the people accounted for some 33 percent. These live disproportionately in Montserrado County where some 41 percent of the total personal national income is received by 26 percent of the population. The county itself has great concentration in the distribution of income, with household and personal Gini ratios exceeding those at the national level: 0.467 and 0.417 respectively as against 0.411 and 0.422 respectively (1974 Census data). None of the other counties is half as rich as Montserrado and in contrast to the latter, all the other counties have, relative to the national totals, more people than income. Further, they are about alike among themselves as they each are unlike Montserrado, their inter-county Gini ratio being 0.028 for households and 0.024 for persons. Only when Montserrado is introduced do the intercounty inequality indices rise to 0.125 and 0.158 respectively.

This regional dualism in distribution is a reflection of a dualistic economic structure that sets Montserrado County apart from all other counties. Modern Sector activities, going on predominantly in the secondary and tertiary sectors and, to a smaller extent,<sup>7</sup> in the modern primary sector are located in urban

<sup>7</sup>Natural resource extraction for direct export has been classified as a modern-sector primary activity. The income generated in this activity is large but after payments to foreign factors, their significance to residents' income is considerably reduced.

areas, the largest of which is that around the national capital city of Monrovia in Montserrado. In all the other counties, traditional agriculture has greater importance.

Income-earning capabilities are less evenly distributed in the modern sector and inequality is therefore higher there. The tertiary sector has the greatest concentration (Gini 0.548), the secondary is next (Gini 0.480) and the modern primary is not far behind (Gini 0.477). When traditional agriculture, which takes in the majority of income earners everywhere except in Montserrado, is added to modern-sector primary activities to obtain a broader primary sector, there is then far less disparity in income-earning opportunities and incomes are more evenly distributed (Gini 0.195).

Clearly, the differences in inequality arise from differences in conditions that determine the distribution of income-earning capabilities. That link was probed empirically with fairly good success. In the absence of time-series, cross-sectional data was used to investigate how far variations in the extent of intercounty inequality can be explained by differences in sectoral location (agriculture and non-agriculture), growth (levels of *per capita* income) and the levels of access to asset-formation opportunities (education and health).

With regard to location in the agricultural sector the level of overall income inequality drops with the extent of the population's involvement in agriculture. The share of income accruing to the top income group falls, with the decline slowing as the process continues. The bottom income group's share rises as the level of involvement in agriculture increases. The middle income group's share shows insignificant results that are the reverse of what happens in the case of the top income group. Among the crops cultivated rice has the greatest significance for the level of inequality.

Distributional consequences of location outside agriculture are the direct opposite of those in agriculture. As the proportion of population urbanised increases the Gini inequality coefficient also rises. This happens as the share of the top income group rises and that of the bottom group declines, both strictly linearly.

Incomes grow faster in the modern sector activities, most of which operate in the urban areas. Thus, behaviour with respect to growth is not unlike that of growing urbanisation. Inequality rises as per capita income levels rise and it falls with falling levels of per capita income. The share of the top income group increases and that of the bottom income group declines as income per capita increases.

The influence of expanding access to educational opportunities is mixed. Summary statistics from the empirical work show that the availability of primary and secondary educational opportunities operate jointly to determine the influence on income distribution. Whereas expanding availability of elementary educational opportunities goes with falling concentration ratios, declining top group income shares and rising bottom group income shares, the reverse happens in the case of expanding availability of secondary educational opportunities. Further, the effects of secondary education exceed (in absolute terms) those of elementary education.

In the case of health facilities, no significant effects were found. This may have been because the effects of health facilities which would be more indirect than in the case of education, for instance, are difficult to pick up when a general facilities availability indicator is used as here.

The study has found that income inequality in the Liberian economy is high, it follows economic-sectoral lines and is consequently regionalised as the underlying dualism sets one county (Montserrado) apart from all the others. The findings have interesting policy implications.

First is the fact that inequality ties in closely with the dichotomy in the economy and any policy measure that sharpens that dichotomy will certainly not help towards reducing the unevenness in income distribution. Inequality is less severe where the population is largely agricultural and it tends to lessen with the extent of the population's involvement in agriculture but gets sharper in urban areas. In the circumstances, curbing the dichotomy may well be tantamount to reducing inequality.

Second, an aspect of the contrasting distributional implications of location in agriculture and outside is the link that the extent of inequality has with income levels. While the absence of great dispersion in the distribution of asset ownership seen in traditional agriculture in particular makes for reduced concentration in the distribution of income, this occurs at a low level of income (proportion of population in agriculture varies with *per capita* income with a correlation coefficient of  $-0.96$ ). As income levels rise there will be a tendency towards concentration in favour of wealthier farmers at the expense of the poorer ones. Thus, whereas the current emphasis on expansion in agriculture as a policy goal is worthwhile, care must be taken to balance the fair distribution of income-generating assets against increases in the levels of income in agriculture.

Third, wealthier classes make greater use of, and benefit more from, asset-formation opportunities. Thus education pays heavier dividends to people capable of making large investments. That is most probably at the root of the fact that expansion in secondary educational facilities benefits the top income group at the expense of the bottom income group with the reverse attending the expansion in elementary education with the gain to the poor being, in absolute terms, smaller than what the top group gains. As long as existing differences in income levels create uneven investment capabilities among income groups greater emphasis on elementary educational opportunities would do more for income equality than would equal or greater emphasis on secondary educational opportunities.

APPENDIX: EMPIRICAL RESULTS

*Notation*

GINI	Gini concentration ratio.
TSHARE	Share of the top income group.
MSHARE	Share of the middle income group.
BSHARE	Share of the bottom income group.
POPLAGR	Proportion of population engaged in agriculture.
POPLAGRSQ	Square of proportion of population engaged in agriculture.
PRPNRC	Proportion of agricultural households cultivating rice.
PRPNRCSQ	Square of proportion of agricultural households cultivating rice.
PRPNCF	Proportion of agricultural households cultivating coffee.
PRPNCFSQ	Square of proportion of agricultural households cultivating coffee.
PRPNCC	Proportion of agricultural households cultivating cocoa.
PRPNCCSQ	Square of proportion of agricultural households cultivating cocoa.
POPLURB	Proportion of population urbanised.
POPLURBSQ	Square of proportion of population urbanised.
INCPCT	Income per capita in thousands.
INCPCTSQ	Square of income per capita in thousands.
ELMEDN	Number of elementary schools per thousand people.
SECEDN	Number of secondary schools per thousand people.
HEALTH	Number of hospital beds per ten thousand people.
HEALTHSQ	Square of number of hospital beds per ten thousand people.

a. *Sectoral Location* (t-values appear in parentheses below coefficients.)

(i) *Agriculture*

GINI	$=\alpha_0$	$+\alpha_1$ POPLAGR	$+\alpha_2$ POPLAGRSQ	$+e$
	=0.496282	-0.189144		$R^2 = 0.642$
		(-3.54)		
	=0.562370	-0.497734	+0.294229	$R^2 = 0.699$
		(-1.69)	(1.06)	
TSHARE	=0.416899	-0.412664		$R^2 = 0.677$
		(-3.83)		
	=0.650366	-1.502813	-1.03944	$R^2 = 0.833$
		(-3.22)	(2.38)	
MSHARE	=0.512566	-0.080244		$R^2 = 0.138$
		(1.06)		
	=0.390967	+0.648037	-0.541369	$R^2 = 0.368$
		(1.66)	(-1.48)	
BSHARE	=0.070534	+0.332420		$R^2 = 0.665$
		(3.73)		
	=-0.041335	+0.654778	-0.498048	$R^2 = 0.720$
		(1.74)	(-1.08)	

GINI	$=\alpha_0$	$+\alpha_1$ PRPNRC	$+\alpha_2$ PRPNRCSQ	$+e$
	=0.667156	-0.332100		$R^2 = 0.251$
		(-1.53)		
	=8.713509	-18.800018	+10.541144	$R^2 = 0.747$
		(-3.49)	(3.43)	
TSHARE	=0.786376	-0.720833		$R^2 = 0.262$
		(-1.58)		
	=15.793691	-35.165466	+19.660339	$R^2 = 0.644$
		(-2.59)	(2.54)	
MSHARE	=0.958705	-0.476672		$R^2 = 0.094$
		(-0.85)		
	=-8.500706	-12.234467	-12.392307	$R^2 = 0.218$
		(0.95)	(-0.98)	
BSHARE	=-0.247724	+0.603744		$R^2 = 0.278$
		(1.64)		
	=-15.683895	+36.032684	-20.222168	$R^2 = 0.891$
		(5.89)	(-5.80)	
GINI	$=\alpha_0$	$+\alpha_1$ PRPNCC	$+\alpha_2$ PRPNCCSQ	$+e$
	=0.415209	-0.226267		$R^2 = 0.328$
		(-1.85)		
	=0.388071	-0.713897	+0.091337	$R^2 = 0.353$
		(-0.48)	(0.14)	
TSHARE	=0.223432	-0.410021		$R^2 = 0.238$
		(-1.48)		
	=0.186181	+0.025934	-0.979920	$R^2 = 0.249$
		(0.02)	(-0.29)	
MSHARE	=0.528158	-0.022733		$R^2 = 0.001$
		(-0.065)		
	=0.728577	-2.322832	+5.272259	$R^2 = 0.244$
		(-1.35)	(1.39)	
BSHARE	-0.203830	+0.443991		$R^2 = 0.423$
		(2.27)		
	=0.197143	+0.522252	-0.175911	$R^2 = 0.424$
		(0.47)	(-0.07)	
GINI	$=\alpha_0$	$+\alpha_1$ PRPNCF	$+\alpha_2$ PRPNCFSQ	$+e$
	=0.378082	-0.042092		$R^2 = 0.32$
		(-0.48)		
	=0.379758	-0.070990	+0.056653	$R^2 = 0.033$
		(-0.14)	(0.06)	
TSHARE	=0.168667	-0.144241		$R^2 = 0.083$
		(-0.80)		
	=0.196372	-0.621983	+0.936562	$R^2 = 0.117$
		(-0.61)	(0.48)	

MSHARE	=0.504229	+0.154460 (0.77)		$R^2 = 0.078$
	=0.537600	-0.420992 (-0.37)	+1.128111 (0.56)	$R^2 = 0.118$
BSHARE	=0.282867	+0.049000 (0.32)		$R^2 = 0.015$
	=0.288943	-0.055774 (-0.06)	+0.205398 (0.12)	$R^2 = 0.017$

(ii) *Non-Agriculture*

GINI	= $\alpha_0$	+ $\alpha_1$ POPULRB	+ $\alpha_2$ POPULRBSQ	+ $e$
	=0.335905	+0.174072 (2.36)		$R^2 = 0.443$
	=0.382570	-0.306312 (-1.43)	+0.759342 (2.33)	$R^2 = 0.708$
TSHARE	=0.055725	+0.436785 (3.36)		$R^2 = 0.618$
	=0.151938	-0.553673 (-1.83)	+1.565612 (3.35)	$R^2 = 0.867$
MSHARE	=0.589870	-0.120692 (-1.55)		$R^2 = 0.255$
	=0.556239	+0.225516 (0.82)	-0.547249 (-1.30)	$R^2 = 0.419$
BSHARE	=0.354405	-0.316093 (-2.59)		$R^2 = 0.490$
	=0.291821	+0.328165 (0.81)	-1.018376 (-1.65)	$R^2 = 0.650$

b. *Growth*

GINI	= $\alpha_0$	+ $\alpha_1$ INCPCT	+ $\alpha_2$ INCPCTSQ	+ $e$
	=0.243711	+0.970696 (5.92)		$R^2 = 0.833$
	=0.202415	+1.525336 (0.97)	-1.663577 (-0.36)	$R^2 = 0.837$
TSHARE	=-0.127980	+2.070548 (6.05)		$R^2 = 0.840$
	=0.143202	-1.545667 (-0.51)	+10.846130 (1.20)	$R^2 = 0.871$
MSHARE	=0.612048	-0.353010 (-1.03)		$R^2 = 0.132$
	=0.160148	+5.673080 (2.47)	-18.074066 (-2.64)	$R^2 = 0.599$
BSHARE	=0.515932	-1.717539 (-7.00)		$R^2 = 0.875$
	=0.696643	-4.127334 (-1.87)	+7.227718 (1.10)	$R^2 = 0.896$

c. Access to Asset-Formation Opportunities

(i) Education

GINI	$=\alpha_0$	$+\alpha_1$ ELMEDN	$+\alpha_2$ SECEDN	$+e$
	=0.398630	-0.310237		$R^2 = 0.140$
		(-1.07)		
	=0.357914	-0.839308	+5.074543	$R^2 = 0.853$
		(-2.77)	(2.53)	
TSHARE	=0.187527	-0.497919		$R^2 = 0.080$
		(-0.78)		
	=0.105267	-1.566802	+10.252105	$R^2 = 0.480$
		(-2.13)	(2.15)	
MSHARE	=0.567874	-0.020554		$R^2 = 0.001$
		(-0.07)		
	=0.566444	-0.039137	+0.178234	$R^2 = 0.001$
		(-0.09)	(0.06)	
BSHARE	=0.244598	+0.518473		$R^2 = 0.131$
		(1.03)		
	=0.328288	+1.605938	-10.430339	$R^2 = 0.759$
		(4.04)	(-3.95)	

(ii) Health

GINI	$=\alpha_0$	$+\alpha_1$ HEALTH	$+\alpha_0$ HEALTHSQ	$+e$
	=0.397931	-0.244227		$R^2 = 0.133$
		(-1.04)		
	=0.407666	-0.451335	+0.831132	$R^2 = 0.142$
		(-0.051)	(0.24)	
TSHARE	=0.214013	-0.636302		$R^2 = 0.200$
		(-1.32)		
	=0.265932	-1.740779	+4.432309	$R^2 = 0.254$
		(-0.99)	(0.66)	
MSHARE	=0.539697	+0.232770		$R^2 = 0.145$
		(1.09)		
	=0.509911	+0.866409	-2.542816	$R^2 = 0.240$
		(1.14)	(-0.87)	
BSHARE	=0.246289	+0.403531		$R^2 = 0.122$
		(0.99)		
	=0.224157	+0.874363	-1.889463	$R^2 = 0.137$
		(0.57)	(-0.32)	

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