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Poverty, Prosperity, & Inequality

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Introduction

This chapter explores economic outcomes for households in the two communities. The next section examines the composition and level of income and expenditures for the two communities. While similar in many ways -- agricultural income predominates in both communities, and expenditure on food is large -- there are also important differences. The Kenyan households are somewhat better off in terms of both income and expenditure, and receive a much higher proportion of their income from livestock operations and employment. Kenyan households also spend proportionately less on food and much more on education.

This analysis is followed by an examination of income and expenditure inequality. Inequality of income is somewhat greater in the Kenya community, but the difference is considerably less when considering inequality in expenditures.

We next consider changes in asset holdings over time in order to get some measure of the dynamics of well-being in the communities. Here there is a stark contrast between the sites. In Kenya while there is no evidence of increasing asset inequality, there has been a marked upward shift in asset ownership since the early seventies. On the other hand, the Tanzanian community has, on the whole, seen asset depletion during the same time period, This is at least partially related to the differences in government policy toward allowing farmers to reap the benefits of the coffee boom. In any event, the relative welfare of the two communities appears to have changed substantially during this twenty-year period.

The final analytical section of the paper develops a food poverty line for the two communities. Using income as the measure, more than forty percent of the households in each community were below the food poverty line. Using the more reliable data on expenditures, however, yields poverty rates of 5% and 15% for the Kenyan and Tanzanian communities, respectively.

The final section of the chapter concludes, reflecting on implications of these results for the remainder of the study.

Level and Composition of Income and Expenditure

Analysis of Income

Defining income is non-trivial. We follow Walker and Ryan (1990) in defining income as net flows from household assets including land, labor, livestock, entrepreneurship, and relationships. We thus include non-marketed food production, gifts, & remittances as parts of income, unlike an earlier analysis of Central Province data (Kmietowicz and Webly 1969). We do not include items that we consider impossible to measure for these communities, such as the value of housing services, the value of leisure, or the value of services rendered to the household by its members (such as child care and water collection).

In order to compare incomes in the two communities, an exchange rate between the Kenyan and Tanzanian shillings is required. This is also non-trivial. The prevailing black market rate at the time of our survey was approximately 10:1. This rate was confirmed in June of 1992 when Tanzania allowed foreign exchange bureaus to operate, trading currencies at any rate they desired. Kenya shillings were sold in Moshi at a 10:1 rate at that time. We wanted a more direct measure of the differences in the cost of living in the two communities, however. Since food constitutes a very large share of total expenditure in the two communities and since food items are more readily comparable in the different communities, we constructed an index of food prices. Using either Tanzanian or Kenyan consumption weights, this index estimates the ratio of the buying power of the two shillings to be 11.1:1. This is our preferred exchange rate, used to convert Tanzanian income and expenditure data to Kenya shillings below.

Correcting for differences in household size is also necessary, both for comparing income and expenditure of different households in the same community and for comparing incomes across communities if average household size differs. In addition to correcting for household size, however, it is necessary to correct for the age and sex composition of the household. A four-year old child does not require as much expenditure as a thirteen year old child. In order to account for these differences, we state household size in calorie adult equivalents. These adjustments attempt to account for the different calorie requirements of persons of different age and sex.[1] In communities that spend a large proportion of income on food, these adjustments should relate well to the relative expenditure per person required to achieve the same level of well-being.

Mean annual household incomes in the two sites were Ksh 18.5 and 23.4 thousand for the Tanzanian and Kenyan communities, respectively; per adult equivalent, incomes were Ksh 3,779 and 4,586, or about Ksh 315 and 382 per month per adult equivalent for Tanzania and Kenya.[2] . (For comparison, an adult male casual laborer working 22 days a month in Kenya would have earned Ksh 600 at this time.) The Kenyans, then, generate about 20% more income per adult equivalent than the Tanzanians. The difference is greater using medians as the measure of central tendency; median income per adult equivalent is Ksh 3,309 in Tanzania but one-third greater at Ksh 4,461 in Kenya. Incomes in these communities are therefore strikingly low.

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[1] We use the same calorie adult equivalent conversions as Collier, Radwan, and Wangwe (1985, p. 71). These are:

Age	Male	Female
<3	0.4	0.4
3,4	0.48	0.48
5,6	0.64	0.64
7-10	0.76	0.76
11,12	0.8	0.88
13,14	1.0	1.0
15-18	1.2	1.0
19-59	1.0	0.88
60+	0.88	0.72

Collier, Radwan, and Wangwe also adjust for the size of the household, arguing that there are economies of scale that allow larger families to achieve the same standard of living as smaller families with less income per adult equivalent. We do not make such an adjustment here for two reasons. First, while there are some economies of scale, we consider that these are offset to a large degree by added child care and other unaccounted for household responsibilities not included in income or expenditure data. Second, any adjustment for size is arbitrary, with the theoretically most appropriate adjustment quite likely varying from community to community.

[2] For comparison with other studies, income per capita works out to Ksh 3,157 and 3,732 in the Tanzania and Kenya communities, or about US$105 and $124. The World Bank estimates that 1992 income per capita for Tanzania and Kenya at US$110 and $310.

The primary source of income for the vast majority of households in both communities is agriculture. More than 90 percent of households grow coffee. In the Tanzanian community, bananas for brewing are another major cash crop. In addition to these, households grow a variety of other crops largely for own consumption, although small quantities are sold in the local trading centres. More than 90 percent of the households keep dairy cattle; most of these produce milk for both household consumption and sale. A small percentage of households from the two communities operate rural businesses, selling used clothing and brewing beer from bananas being the most popular in Kenya and Tanzania respectively. Some households earn income from labour sales either in the casual or formal market. Income was also reported from life cycle sources such as marriage payments, remittances and gifts.

As shown in Table 4.1, more than three quarters of total earnings (83% for Tanzania and 75% for Kenya) in the communities are farm-based. The majority of this farm income, however, is imputed value of food and milk produced on the farm and consumed by the household. Such income accounts for 58% of total income in Tanzania and 47% in Kenya. Net income from crop sales accounted for 22.4 percent of total incomes in Tanzania, and 10.9 percent in Kenya. Three quarters of the income from crop sales in Kenya was from coffee. Cash income from all farm operations account for 24.7 percent of total income in Tanzania and 29.4 percent in Kenya. Part of the explanation for the rather low contribution of crop sales to household incomes is the poor performance of coffee, the traditional cash crop in the communities; one quarter of the households in Kenya reported losing money on coffee production during the 12 month survey period.

By contrast, livestock income, mainly generated through sales of milk, accounts for only 2.3 percent of total incomes in Tanzania but 18.5% in Kenya. This is a key difference between the communities. In the Kenyan community, livestock income is three times as large as that from coffee..

Table 4.1: **Composition of Income**

Source	Percentage Contribution	
	Tanzania (Tanzania)	Kenya (Kenya)
Net Income From:		
Crop sales	22.4	10.9
Livestock	2.3	18.7
Business	10.2	5.0
Employment	4.0	14.7
Regular	3.4	13.4
Casual	0.6	1.3
Remittances, gifts & marriage payments	2.3	3.8
Remittances & Gifts	2.2	3.4
Marriage	0.1	0.4
Other	0.6	0.7
Own Produced & Consumed farm produce	58.2	46.3

Businesses, on the other hand, generate 10.2 percent of total income in Tanzania and 6.3 percent in Kenya. By contrast, formal and casual employment is rather more important in Kenya contributing 14.2 percent to total household income compared to 4.0 percent in Tanzania.

Overall, markets are more important sources of income in Kenya. Virtually half (49.9%) of income in the Kenyan community comes from crop or livestock sales, business income, or labor markets. In Tanzania, the amount is considerably less at 38.9%.

In both communities, sources of income vary with the level of income, giving some indication of the characteristics of higher-income households. Table 4.2, however, shows that the composition of income changes in different ways in the two communities as incomes rise. Not surprisingly, the value of farm output consumed declines substantially as a proportion of income when incomes rise. In each community the decline is just over 25 percentage points, starting from a higher level in Tanzania. Total agricultural shows a similar proportionate decline in Tanzania; for the lowest income tercile, agricultural income constitutes almost 95% of all income. In Kenya, however, agriculture's share of income declines much less, and actually increases between the

Table 4.2: Composition of Income by Income Tercile

		Kenya		Tanzania	
	Tercile	By Tercile	Mean	By Tercile	Mean
		(Percent)			
Value of Farm Output Consumed	Low	62.0	46.3	79.6	64.9
	Middle	50.3		75.1	
	High	36.8		53.7	
Agriculture and Livestock Net Cash Income	Low	16.9	29.7	15.2	16.6
	Middle	31.4		11.5	
	High	33.5		20.0	
Total Agricultural Income	Low	78.9	75.9	94.8	81.4
	Middle	81.7		86.7	
	High	70.3		73.7	
Business Income	Low	4.7	5.0	0.4	11.4
	Middle	2.3		6.8	
	High	7.1		18.0	
Salary Income	Low	6.0	13.4	0.8	3.5
	Middle	11.5		2.4	
	High	17.8		5.1	
Casual Labor Income	Low	3.2	1.3	1.5	0.6
	Middle	1.6		0.6	
	High	0.3		0.4	
Other Income	Low	7.2	4.4	2.5	3.1
	Middle	2.9		3.5	
	High	4.5		2.8	
Income per Adult Equivalent, Ksh	Low	2217		1853	
	Middle	4310		3268	
	High	9112		6924	

low and middle tercile. This reflects the large increases in livestock and, to a lesser extent, coffee earnings that accompany higher incomes. The table shows that agricultural cash income, which consists primarily of these two sources, doubles as a share of income between the lowest and highest terciles in Kenya, while showing a much smaller increase in Tanzania. Thus, it appears that in Kenya households move up the income ladder by investing in profitable agricultural opportunities much more frequently than in Tanzania.

income in Tanzania is in the share of business income. Such income is almost non-existent for tercile, but constitutes 18 percent of income for those in the high also increases its share, but is never very large in Tanzania. In Kenya, salary income increases tercile. Thus, Table 4.2 suggests

businesses (particularly brewing) and, to a lesser extent, cash agriculture and salaried employment , these last two are relatively much more important than Further analysis (not shown in the table) indicates that in Kenya business and

these households for salaries; households with salary income of 2000 or more per year earn

categories are present in more households in Tanzania

after the collapse of coffee prices in 1989. This reaped havoc for these coffee-growing areas. that coffee fortunes would change or were unable to shift into

that is losing money in the short run if long-run prospects are for an improvement in prices.

government regulations requiring bureaucratic approval) or unwilling to uproot their coffee trees,

and may have been the most rational response, but with low yields income from coffee almost

response to low coffee prices during the time of our survey, with some investing in livestock and

incomes are surprisingly low on this high potential land.

Analysis of Expenditure

Income is difficult to measure correctly, especially in rural areas of less developed countries where it accumulates seasonally and sporadically, frequently in small units, and where basic numeracy and record-keeping skills are often absent. In addition, income is subject to considerable fluctuation from year to year. Many expenditures, such as those for the largest category, food, tend to be much more regular and thus easier to estimate from a periodic survey than income. Irregular expenditures, such as those for consumer durables or school fees, tend to be large and easier to remember than small, irregular sources of income: Even when incomes fluctuate, households tend to cash in assets to maintain expenditures when possible. Thus, most researchers in rural areas consider estimated expenditures as a better proxy for income than the direct estimate of income itself. This section then examines both the level and composition of expenditures for the two communities.

The reported mean expenditures on all items for the 12-month period were Ksh 5670 and 7278 per adult equivalent in Tanzania and Kenya, respectively; median expenditures were Ksh 5340 and 6872, approximately a 30% difference for both means and medians. These expenditures are higher than reported incomes in the communities, as is common in most surveys.

Table 4.3 breaks down expenditure In both communities. Food expenditures are quite large in these poor communities, accounting for 37 percent of total household expenditure in both sites. The value of own produced food accounted for another 43 percent of total expenditure in Tanzania and 29.3 percent in Kenya. Adding together purchased and own produced food, food claimed 80 and 66 percent of the total household budget in Tanzania and Kenya respectively. Even if our exchange rate adjustments are in error, the higher share of food in the household budgets of the Tanzanian families is evidence of their relatively greater poverty,

The largest difference between the communities other than for food expenditure is in education. Education's share of household expenditure in Kenya is 4 times that in Tanzania; and constitutes over 40% of non-food expenditure. This is partly a price effect -- schools in Kenya are

Table 4.3: Composition of Expenditure

Expenditure Item	% share of total expenditure	
	Tanzania	Kenya
Food	80.2	66.4
Own produced food	43.2	29.3
Purchased food	37.0	37.1
Education	3.5	13.6
Health	1.4	2.9
Gifts, charity & harambee	3.3	4.0
Tobacco	0.7	0.9
Clothing	4.2	2.7
Transport	1.2	2.8
Energy	1.7	3.0
Soaps	1.5	1.3
Marriage payments	1.3	0.9
Other	1.0	1.2

more expensive than in Tanzania -- but also reflects a much greater investment in secondary education in Kenya.[3]

The composition of expenditure in Kenya changes with income in the usual ways. The expenditure elasticity of food is 0.86, leading to a decline in the share of food (both produced on farm and purchased) from 75.4% to 59.4% from the lowest to the highest expenditure tercile. The two items with the largest increase in expenditure share are education and transport. The share of education increases from 9.8% to 14.5%. Limiting the calculation to households with children of school age, the expenditure elasticity of educational expenditures is quite high at 1.32. The increase in transportation expenditures is related to the increasing share of salaries for higher income households; most salaried workers travel regularly to Thika or other places of work by public transportation.

[3] See Chapter 12, particularly Tables 12.1 and 12.2, for more data and discussion of these points.

In Tanzania, on the other hand, the composition of expenditure changes much less with rising expenditures per adult equivalent. Total expenditure on food declines only slightly between the lowest and highest expenditure terciles, from 83.8% to 76.6%. Clothing expenditures show the largest relative change, increasing from 2.3% to 6.5%. The share of educational expenditures is almost flat, staying between 3 and 4 percent for all three terciles, but this is partly the result of changes in the age composition of households by tercile. Limiting the analysis to households with school-age children, the income elasticity of educational expenditures is almost identical to that found for Kenya, at 1.29.

Inequality of Income and Expenditure

The analysis above shows that the Kenyan community on average has higher income and expenditures than the Tanzanian community. Differences in averages, however, could mask higher inequality, leading to the poor being worse off in the higher income community. This section investigates that question.

Table 4.2 above shows that mean income per adult equivalent for the lowest tercile is still higher in Kenya than in Tanzania; for expenditures there is a similar advantage to the Kenyans. The bottom tercile, however, is still a large range that could mask the position of the poorest in the communities..

Income and expenditure data produce different answers for this question. Analysis of income indicates that the poorest households are in Kenya; those in the 6th percentile and below for income per adult equivalent, and those in the 12th percentile and below for gross income are poorer in Kenya than in Tanzania. Above these levels, the Kenyan households are uniformly of higher income. Figures 4.1 and 4.2 present Lorenz curves for total income and income per adult equivalent. Both show higher income inequality in Kenya at the lower end of the income scale; income per adult equivalent is more unequally distributed in Tanzania at the upper end of the distribution. The corresponding Gini coefficients are almost identical for total income (0.350 in Kenya and 0.348 in Tanzania), while that for Kenya is much larger for our preferred measure of

income per adult equivalent (0.399 for Kenya and 0.328 for Tanzania). Standardizing on the basis of household size therefore lessens inequality in Tanzania, but exacerbates inequality in Kenya.[4]

How important is this difference in inequality? The size of the difference is large. Unfortunately, it is challenging to test for significant differences between Gini coefficients. We conducted a small Monte Carlo study, which indicates that the difference between the coefficients of income per adult equivalent is larger than what would be expected to occur if measurement errors are approximately equal for income in the two communities.[5]

The expenditure data, however, tell a different story. Figure 4.3 presents Lorenz curves for expenditures per adult equivalent, showing that the distribution is virtually identical in the two communities below the median. There is somewhat greater inequality in Kenya for households in the upper half of the distribution, but given the higher average income in Kenya, this Lorenz curve implies that all households in the bottom half of the distribution are better off in Kenya than households at a corresponding percentile in Tanzania. Gini coefficients for total expenditure distributions are 0.269 for Kenya and 0.262 for Tanzania, while those for expenditure per adult equivalent (corresponding to the Figure) are 0.283 and 0.260, respectively. These differences are clearly within the margin of error suggested by our Monte Carlo study.

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[4]. This effect does not arise from a difference in the overall correlation of household size and income. Surprisingly, the correlation between total incomes and number of adult equivalents is higher in Kenyan than the Tanzanian community. The deterioration in income distribution when incomes are expressed per adult equivalent has to do with the eight households at the top of the income per adult equivalent distribution. In Tanzania, these households are of approximately average size but in Kenya, three of the four highest in the income per adult equivalent are single person households who appear well down on the list in the total household income ranking, rising dramatically to the top when incomes are expressed per adult equivalent.

[5]. Gini coefficients are upwardly biased whenever there is measurement error. This results since incomes are sorted after observing the error; households with large positive errors will be moved closer to the top than they should be, and households with large negative errors will be moved closer to the bottom, exaggerating the degree of inequality. We conducted a small Monte Carlo experiment, assuming that the reported incomes were true, and then adding normally distributed percentage errors with standard deviations of 20%, 25%, 30% and 40% of estimated household income. We then re-sorted the households and calculated Gini coefficients. The bias is readily apparent, with estimates of the Gini coefficient upwardly biased by 0.08 when the error term had an error of 40%. Assuming the measurement error is the same for the two communities, and thus the expected bias is about the same, and assuming that in neither case is the error systematic (richer households have the same percentage error on average as poorer households), the standard deviations of the Monte Carlo study suggest that the difference in the Gini's for the distribution of incomes per adult equivalent would be unlikely to occur randomly. We have no way of testing whether or not these assumptions hold.

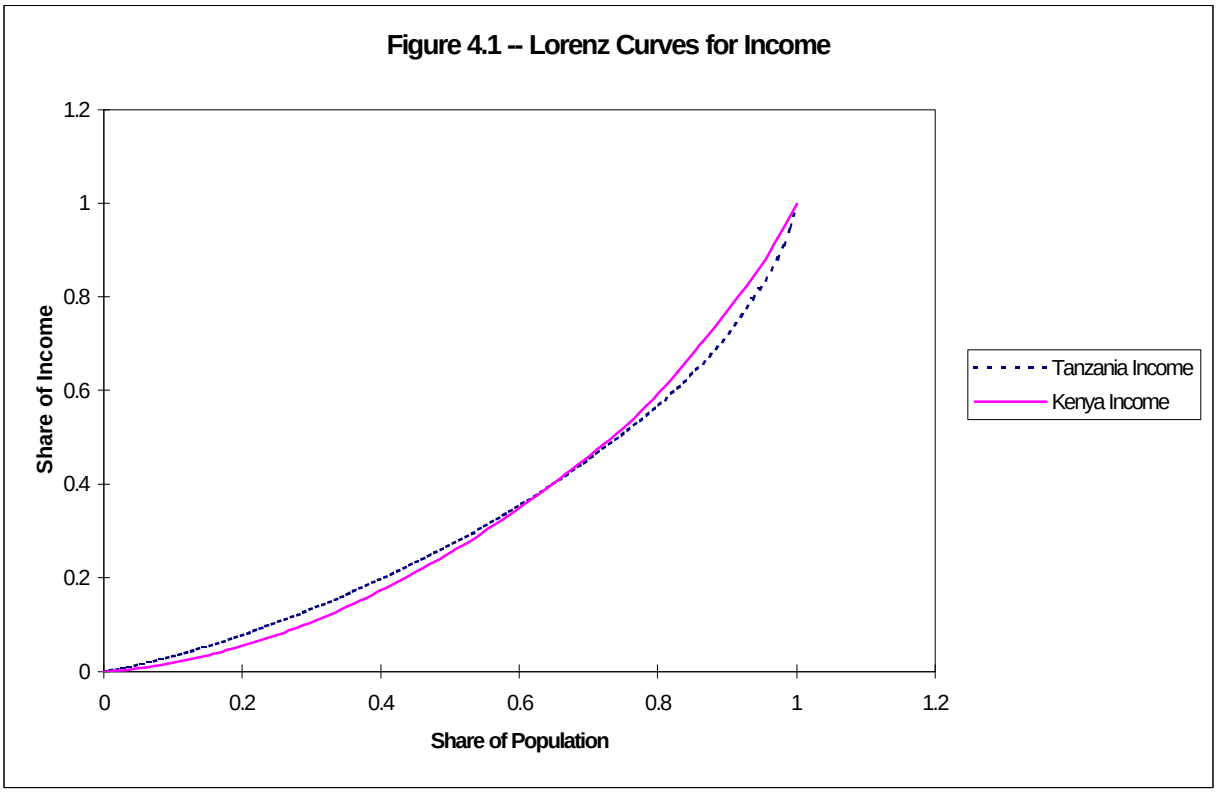


Figure 4.1 -- Lorenz Curves for Income
Share of Income
Share of Population
0
0.2
0.4
0.6
0.8
1
1.2
Tanzania Income
Kenya Income

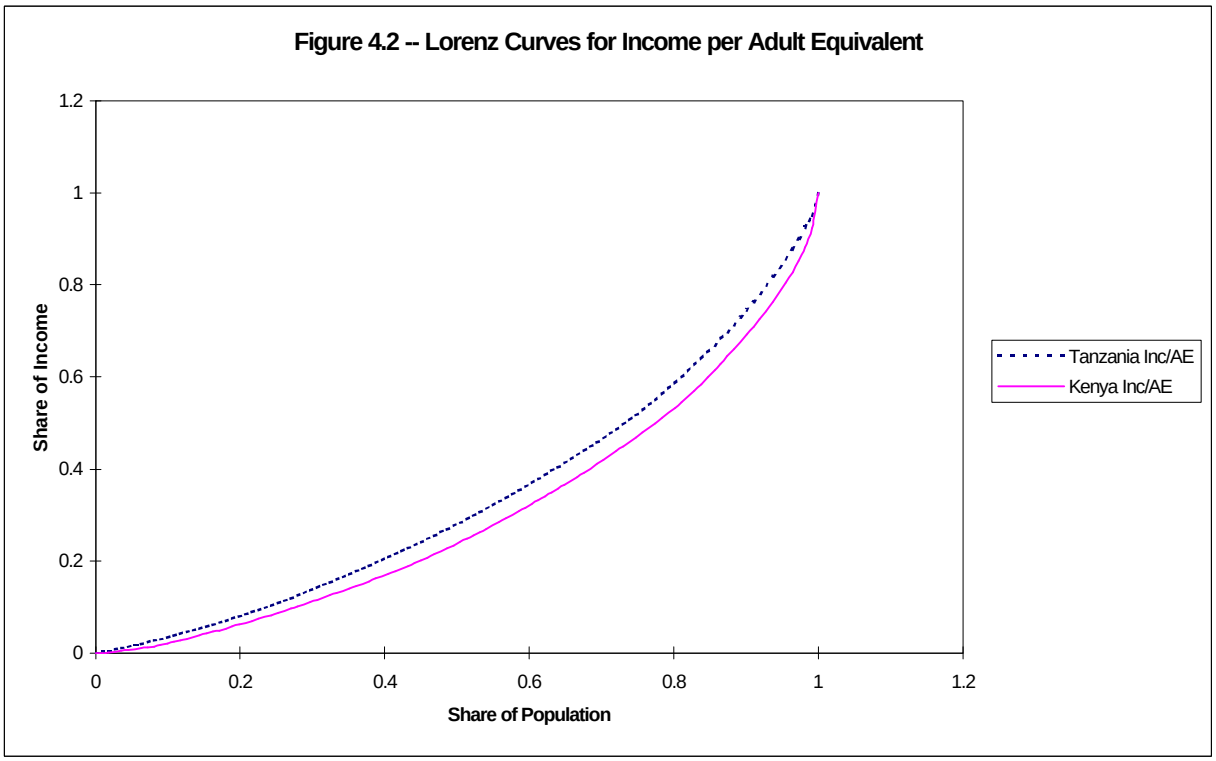
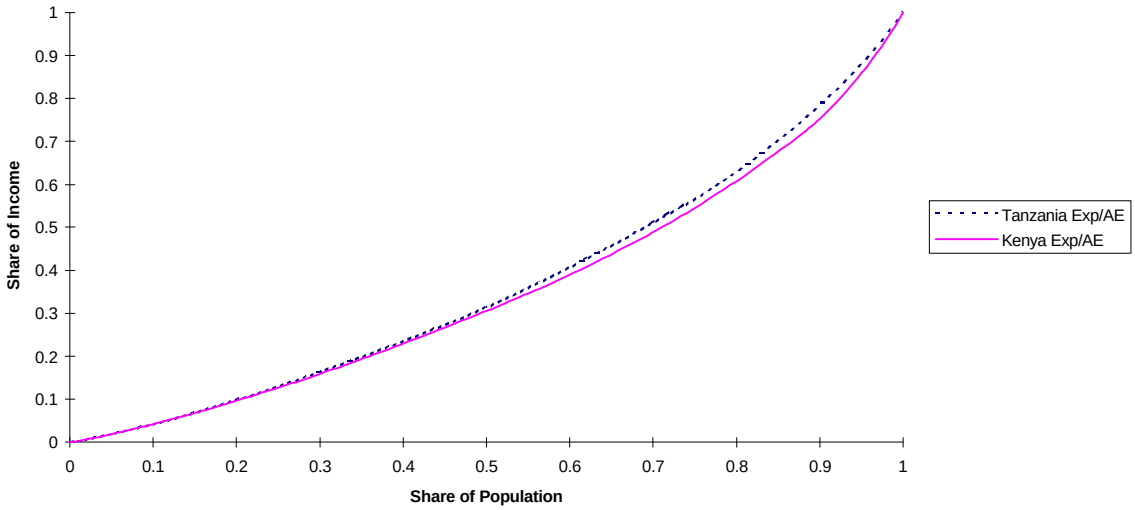


Figure 4.2 -- Lorenz Curves for Income per Adult Equivalent
Share of Income
Share of Population
0
0.2
0.4
0.6
0.8
1
1.2
Tanzania Inc/AE
Kenya Inc/AE

Figure 4.3 -- Lorenz Curves for Expenditure per Adult Equivalent



Given the difficulties of measuring income directly, we put the greatest weight on Figure 4.3 and the Gini coefficients for expenditure per adult equivalent. Therefore, despite some evidence on the income side that the poorest households are worse off in Kenya, we conclude that while income and expenditure may be slightly more unequally distributed in Kenya, the poorest households still have more resources per adult equivalent than their counterparts in Tanzania.

Assets Holdings

The survey elicited detailed information on ownership of different household assets over time. Assets included items such cooking equipment, farm equipment and implements such as carts, ploughs and harrows, hoes, hand mills and hand pumps, and other household possessions including water tanks, bicycles, sewing machines stools, chairs, beds, radios, power generators, and motor vehicles. Most of the farm implements here are very basic, commensurate will low technological levels. Only one household from Tanzania and none from Kenya had a power generator. Three households from Tanzania and two from Kenya owned serviceable motor vehicles.[6]

[6]. There were several junked vehicles in the survey households in both communities.

Since income and expenditure information were not available over time, we are particularly interested in tracking ownership of assets in order to give us some idea of changes in economic position during the last twenty years. In order to examine changes in asset holding over time, we calculated the value of total assets per household for the 1970/74 period and 1991, using prices prevailing in 1991.[7] Figures 4.4 and 4.5 present complete information on changes in asset holdings between the early seventies and the time of our survey. Table 4.4 summarizes this information as movements among asset quintiles during the same time period.

The figures and table show considerable movement among the households; there is no evidence of the rich getting richer and the poor poorer. Comparison of asset levels over time is made easier by inserting the line y=x in the figures. Households below this line saw their asset level deteriorate during the time period, while those above the line improved their asset holdings. Importantly, households in Kenya are for the most part above the line, while households in Tanzania for the most part held fewer assets in 1991 than in 1974. Indeed, the households in

Table 4.4: Changes in Asset Ownership Quintile, 1974-1991

Quintile in 1974	Quintile in 1991				
	1	2	3	4	5
Tanzania	(Percent)				
1	53	26	10	5	5
2	32	21	25	11	11
3	5	15	25	51	5
4	11	26	15	11	37
5	0	11	25	21	42
Kenya					
1	35	35	24	0	6
2	29	24	29	12	6
3	6	29	18	35	12
4	18	12	18	35	18
5	12	0	12	18	59

Notes: Quintile 1 is the lowest, 5 the highest.

[7] We also elicited information on and calculated asset positions for three intervening points in time; these results are not reported here, but show considerable dynamics even in the intervening years.

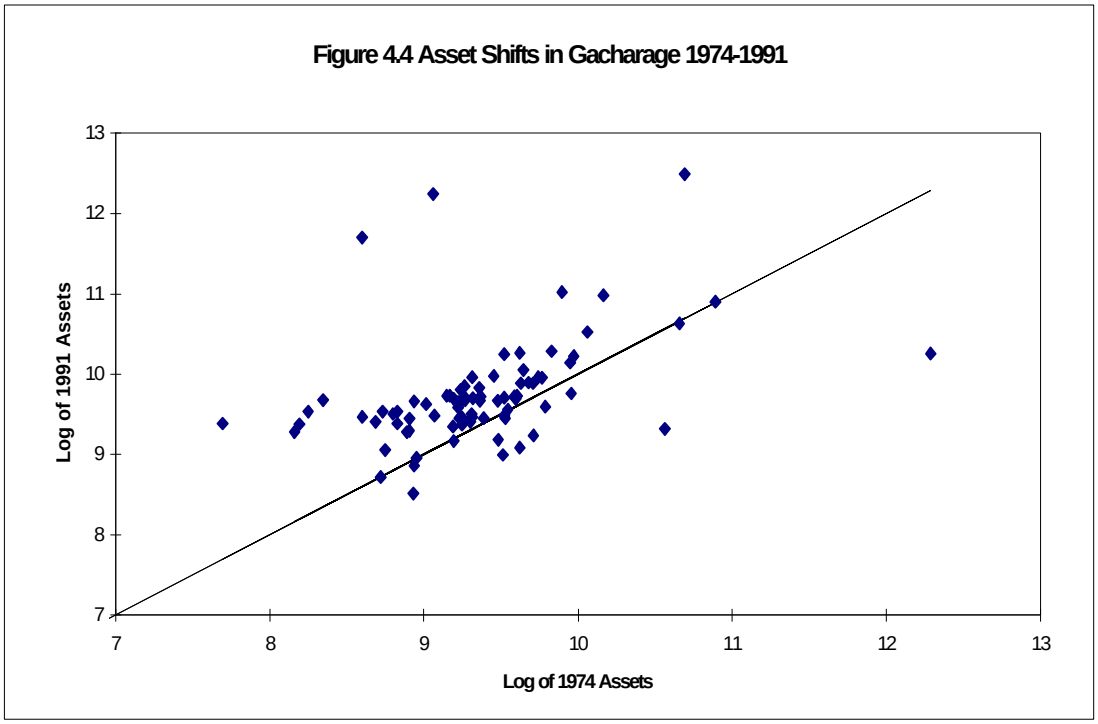
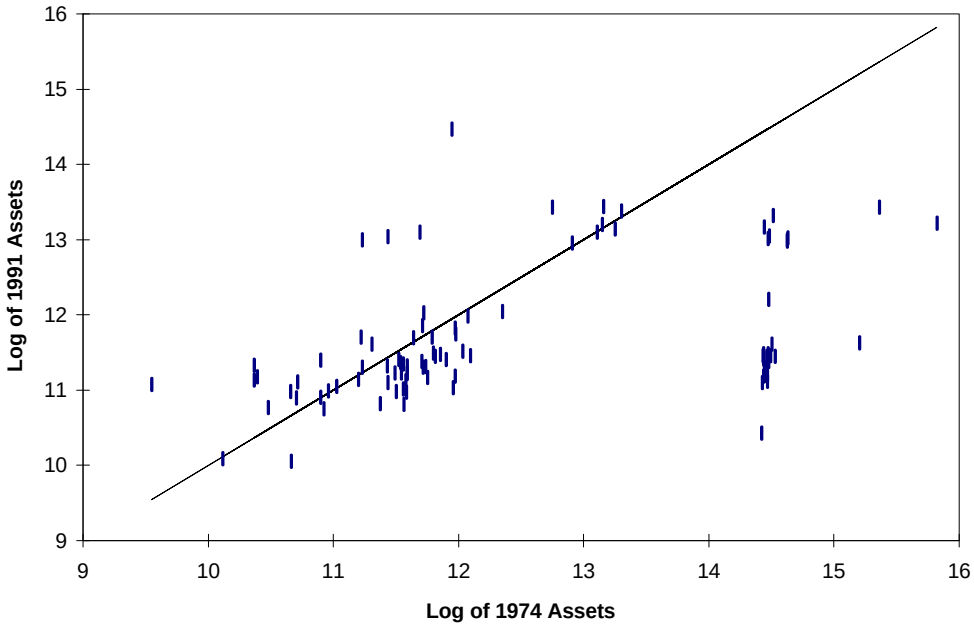


Figure 4.5 Asset Shifts in Kirua 1974-1991



Tanzania having the most assets in 1974 uniformly had a decrease in asset holdings during the period. Most of these owned serviceable motor vehicles at the earlier time period but not at the time of the survey. The information on assets, then, provides evidence that welfare may have been improving in Kenya over this time period, while it has been deteriorating in Tanzania.

In conclusion, the relative positions of households in terms of asset holdings were quite dynamic in both communities during this time period. It is not the case the all the households at the top of the distribution in the early seventies remained there during the next two decades, nor did those at the bottom in the early seventies all remain there. Furthermore, households in Kenya increased their asset holding substantially during the intervening years, while households in Tanzania lost assets.

Poverty Incidence

Recent poverty literature is replete with debate on the conceptualisation and application of different poverty measures.[8] We developed a poverty line based on the following criteria. First, we calculate the money required to purchase 2400 calories per adult equivalent per day using average food expenditure shares of maize, beans, rice, sugar, meat, fats and oils, and other foods.[9] We then assume that, for a poor household, the share of food in the budget would be 80% (including the implicit value from own-production). These assumptions yields a food poverty level of Ksh 3810 annually per adult equivalent. Forty-nine households in the Kenya community had income per adult equivalent below the poverty line, but only 6 households had expenditure per adult equivalent below the line. In Tanzania, incomes for 60 households and expenditures for 17 were below this level. On income terms therefore, more that 44 percent of the households in the two communities fall below the poverty line, the incidence of poverty being higher in Tanzania than Kenya. On expenditure terms, this poverty incidence falls drastically to 5 and 15 percent for

[8] Examples of recent poverty literature include Gustafsson & Makonnen (1992), Boateng et al (1992), Groot & Kanbur (1990), Rodgers (1989) and Jazairy et al (1992).

[9] We assumed that the average cost per calorie for other foods equalled the weighted average of average cost per calorie form maize, beans and sugar.

Kenya and Tanzania respectively . On either terms, the Tanzanian community appears to be worse off than the Kenyan community.

Discussion and Summary

This chapter paints a picture of two poor communities, with that from Tanzania somewhat poorer than the one from Kenya. Within these poor communities, poverty -- defined here as not being able to purchase sufficient calories -- appears widespread when the poverty line is compared to reported incomes; when the poverty line is compared to reported expenditures, however -- our preferred measure -- only the bottom 15% of households in Tanzania and 5% of households in Kenya fall below the line. Although inequality may be somewhat greater in Kenya than in Tanzania, the poorest households are still better off in Kenya. Relative wealth within the communities, however, changes over time, with asset positions quite fluid between the early seventies and early nineties.

As mentioned above, world events -- the collapse of the International Coffee Agreement and the subsequent fall in coffee prices -- contribute to the low incomes of these communities, despite their location on high-potential land. In addition, at the time of the field survey, the currencies in both countries were overvalued as exchange rates were administratively fixed, and the exchange rate regimes are likely to have worked generally against tradables. This exacerbated the impact of low coffee prices. Coffee farmers in Kenya also faced rapidly increasing input costs following decontrol of fertilizer prices at the beginning of 1990. Households, therefore, faced rapidly declining value-cost ratios and gradual erosion of coffee earnings. Exchange rate controls, decontrolled input price and collapsed coffee prices relegated coffee to a secondary role, while other activities such as food crop production, dairy farming, businesses and employment become more important.

Erosion of coffee incomes also affected the viability of the coffee cooperative sector in Kenya, the main conduit for short term credit to these farmers. Since cooperative society credit is used for a variety of purposes in addition to financing agricultural production -- such as education and food -- the implications were widespread.

The handling of 1976-79 coffee booms, fully passed on to Kenyan coffee farmers but heavily taxed in Tanzania, had decisive effects on economic outcomes in the communities. This had an impact both on the accumulation of assets and on the diversification of the Kenyan community, reducing reliance on crop incomes. Since coffee farmers in Kenya saved 70% of the boom (Bevan et al: 1989), boom-related investments in Kenya are likely to have permitted investments necessary for activity switches that led to some diversification of the local economy. Such investments may also have led to the somewhat greater inequality in the Kenyan community. The Tanzanian farmers were not able to move up the ladder to more profitable activity mixes in the absence of coffee boom resources.[10]

One profitable activity mix available in Tanzania but not in Kenya is local brewing of alcoholic beverages. The lucrative local market for bananas found in Tanzania leads to substantial income for some households, and is the most common business activity. In Kenya, local brewing was banned in the seventies, eroding the local sugarcane market. Prior to this time, sugarcane was the main brewing feedstock. Although the community in Kenya grows bananas and sugarcane, these are mainly for a limited fresh market. Whether the ban in Kenya simply diverts expenditure from the local community to the coffers of Kenya Breweries, or lowers the social ills related to excessive alcohol consumption, or both, is difficult to determine. Households in Kenya did spend significantly less income on alcohol than those in Tanzania, despite higher prices for the product. In any event, these differences in policy have had considerable impact on cropping patterns and methods of investment in business.

[10] Bevan et al (1989) argue that due to entry constraints to progressively profitable activities, peasants are often stuck at a relatively unprofitable mix of activities. Coffee income allowed the households in the community to make the necessary investments to move up the ladder. The sequence hypothesized by Bevan et al moves from food production on land previously inherited, to livestock, to cash crops and business, and ultimately to non-agricultural wage employment. In our communities in the early nineties, livestock was clearly more profitable than the major cash crop, but nevertheless the general idea is in agreement with what we find.

References:

Atkinson, A B. 1991. "Comparing Poverty Rates Internationally: Lessons from Recent Studies in Developing Countries." *The World Bank Economic Review*, 5:1 pp. 3-21.

Bevan, D, P. Collier, & J.W. Gunning. 1989. *Peasants and Governments: An Economic Analysis***.** Oxford: Clarendon.

Boateng, E O, K. Ewasu, R. Kanbur, & A. McKay. 1992. "A Poverty Profile for Ghana, 1987-1988" *Journal of African Economies* 1:1 pp 25-59.

Collier, P., S. Radwan, & S. Wangwe. 1986*. Labour and Poverty in Rural Tanzania***.** Oxford: Clarendon.

Groot, C & R. Kanbur. 1990. *Policy Oriented Analysis of Poverty and the Social Dimension of Structural Adjustment: A Methodology and Proposed Application in Cote d"Ivoire, 1985-88.* DSA Working Paper Series. Washington D.C: The World Bank.

Gustafsson, B., and N. Makonnen. 1993. "Poverty and Remittances in Lesotho" *Journal of African Economies* 2:1 pp. 48-71.

Jazairy, I., M. Alamgir, & T. Panuccio. 1992*. The State of World Rural Poverty. An Enquiry into Its Causes and Consequences***.** New York University Press for the International Fund for Agricultural Development.

Kmietowicz, T., & P. Webly. 1969. "Statistical Analysis of Income Distribution in the Central Province in Kenya" *Eastern Africa Economic Review 7:2 Old series***.**

Lofchie, M. 1989. *The Policy Factor: Agricultural Performance in Kenya and Tanzania***.** Boulder, London & Nairobi: Lynne Reinner & Heinemann

Pinckney, T.C. & P.K. Kimuyu. 1994. "Land Tenure Reform in East Africa: Good, Bad or Unimportant?" *Journal of African Economies* 3:1 (April) and Chapter 10 in this report.

Rodgers G. 1989. *Population Growth and Poverty in Rural South Asia.* New Delhi, Newbury Park & London: Sage publications.

Walker, T M, & J.G. Ryan. 1990. *Village and Household Economies in India"s Semi-Arid Tropics***.** London and Baltimore: John Hopkins University Press.