

PROFILES OF INCOME AND POVERTY IN RELATION TO HIV/AIDS
CONTROL IN TANZANIA

By
Phare G.M. Mujinja

Institute of Public Health
Muhimbili University college of Health sciences

June 1997

A paper prepared for the National Aids Control Programme, NACP
Ministry of Health Dar-es-Salaam.

INTRODUCTION

A series of external and internal economic shocks have characterized the Tanzanian economy since independence. Those shocks have necessitated the government to bow to IMF and World Bank conditionalities to borrow money for the revival of the economy. Apart from economic shocks, some social shocks have also exacerbated the situation. HIV/AIDS being the most significant social shock in the last two decades, affects the most productive and reproductive age groups of the economy, thence it is expected to inflict a significant negative impact on the economy by reducing the labor supply and consequently incomes of the affected and infected individuals and households.

Tanzania has more than 80% of her population in the rural areas who in some rural areas have an average of per capita income of about Tshs 31,000 (Over et al 1995) compared a national average of Tshs 103,854 (World Bank, May 1995)*. The wealthiest 20% of Tanzanians (5th quintile) control 45.4% of total income while the poorest 20% (1st quintile) control only 6.8% (World Bank 1995). The most vulnerable groups in the society have been found to be the most affected by HIV/AIDS (Over Ainsworth, Mujinja et al, 1996). The poorest are among the vulnerable groups apart from children and women.

*Tshs 84,925 (US \$ 172) for rural areas at official exchange rate.

The per capita income of Tanzanians has been declining faster since 1980 (see table 1 below) compared to the average of Sub-Saharan Africa. The life expectancy of Tanzanians has also grown comparatively slow compared to Sub-saharan average countries . While, the current infant mortality rate is expected to increase if the AIDS is not contained.

Table 1: Social indicators for Tanzania and Sub-saharan Africa

	1980		1985		1990/91	
	TZ	SSA	TZ	SSA	TZ	SSA
Per Capita Income (1991 US \$)	284	582	309	491	110	340
Life Expectancy at Birth (Years)	47	47	48	49	48	51
IMR (per 1000)	122	127	117	118	115	107
(Kilocalories per Capita	2244	2107	2299	2040	2206	2120
Primary School Gross Enrollment Rate	93	70	75	75	69	70

Source: African Development Indicators, Donors to African Education 1994 (reproduced in World Bank 1995).

HOUSEHOLD CHARACTERISTICS

Rural households have bigger household sizes and dependents compared to urban households. Also, they have more people in the bottom 20% who are poor and less in the top 20% of those who are better off compared to urban households. Poor households are likely to have many children than better off households and that perpetuates poverty. The World Bank study has also shown that a family with eight members is almost twice as likely to be in the bottom income quintile as a family with four members World Bank (1995). Sarris and Van den Brink (1993) using the 1976/77 Household Budget Survey show that rural households with low cash expenditures, due to higher amount of subsistence consumption, have, on average higher total per capita consumption than urban households of similar average cash expenditures (Sarris and Van den Brink 1993)

Table 2: Demographic Characteristics of the Tanzania Household, 1993.

	ALL	INCOME GROUP		LOCATION		
	TANZANIA	Bottom 20%	TOP 20%	Rural	Urban	DSM
Households Size	5.91	7.05	4.89	6.16	5.48	4.84
Dependency Ratio	1.15	1.31	0.94	1.23	0.99	0.88
Average Age of Head	43.7	45.8	41.4	43.8	44.6	39.2
Female-Headed Household%	12.2	10.9	15.3	10.0	17.6	14.8
Aver. number of children less than 15	2.8	3.5	2.1	3.0	2.4	2.11
Aver. number of children less than 18	3.2	4.1	2.4	3.4	2.8	2.4
Aver. number of adults older than 65.	0.15	0.2	0.14	0.16	0.15	0.05

Source: World Bank 1995

AIDS AND HOUSEHOLD COMPOSITION

A World Bank study (1995) found about 1.2% of the Tanzanian households having no adults aged between 15-59. In rural areas, 4.2% of households had no adults between 15 and 49 and 4.7% of households in urban areas, excluding Dar es Salaam had no such adults. In Kagera, an area hard hit by HIV/AIDS, 6% of the households had no such productive adults (World Bank 1995) which is a reflection of the impact of HIV/AIDS on productive labor. A study by the World Bank and University of Dar es Salaam has also shown that households affected by AIDS death had a higher dependency ratio compared to other households (Over, Ainsworth, Mujinja et al 1996).

EXTENT OF POVERTY

Poverty is lack of income and it is caused by all factors which put the income low. HIV/AIDS as a disease which debilitates an individual and the caretakers (somehow is likely to be an accelerators of poverty by reducing the time and capacity to work and also by high costs of treatment of a long illness.

Poor households were defined in 1995 by the World Bank to be those with income below Tshs 46,173 per adult equivalent (World Bank 1995). Also in 1993 about 51% of the Tanzanian rural population could be categorized as poor compared to 65% in 1983 according to the above criterion. Furthermore, 90% of the rural population live

in houses with earth floors compared to 35% in the urban areas (World Bank 1995).

Such data implies that poverty is mainly a rural phenomenon which also causes migration of the young people to the urban areas where it has been reported that about 150,000 young boy migrate to Dar es Salaam every month (Mtanzania, May 1995). In the process of searching for better lives, the young people are likely to pick up HIV and spread it in the rural areas when they go back.

HIV/AIDS affects more the people and families who are at their reproductive stage of their life cycle which have been proved that about 20% of these families are poor families (World Bank 1995). Because HIV/AIDS as a disease, on average, has a long duration of illness, the costs of treatment are likely to be high and unaffordable to such families. The orphans from poor families are likely to be affected more than those from relatively better households (assuming that they will not be fostered in better households).

EXPENDITURE LEVELS:

Tables 3 and 4 below show that the poorest seem to spend low, but their consumption expenditures are quite close to total expenditure and poverty line (Sarris & van den Brink 1993). Also there is a large disparity between the richest quintile and the poorest quintile in expenditure levels.

Table 3: Expenditure Levels (1993)

	TANZANIA			RURAL		URBAN	DSM
	Poorest	Better-off	All	Poorest	All	All	All
Per Adult Equiv.	61,145	381,674	183,167	60,959	146,297	230,667	416,387
Per Capita	38,010	267,355	123,351	37,709	95,328	161,773	290,631

Average computed at the household levels.

Source: World Bank, 1995.

Table 4: Expenditure Patterns (Cash and Kind) by Household Type

	TANZANIA			RURAL		URBAN	DSM
	Poorest	Better-off	All	Poorest	All	All	All
Food	189,202	703,838	415,811	75,477	379,596	454,730	678,503
Health	3,063	25,534	11,300	8,279	8,607	15,338	25,900
Education	3,495	15,406	8,269	3,506	5,846	13,543	14,277
Housing	13,982	66,570	33,190	14,085	24,784	49,783	61,460
Water	98.9	3,184	1068	1,578	64.95	1,919	9,333
Clothing	9,452	46,466	23,802	9,593	19,797	28,954	49,180
Total expenditure	255,847	1,139,152	614,150	258,820	523,393	732,393	1,181,651

Source: World Bank (1995)

From table 4 above, the share of income spent on food decreases as expenditure increases. The share of food on total budget is highest in rural areas, rising from 57.4% in Dar es Salaam to 72.5% in rural villages. Urban dwellers spend more on education, health and clothing compared to rural residents. In 1976/77 food expenditure comprised of 75% and 66% of total spending in rural and urban areas respectively and the second most important expenditure share, in both rural and urban areas was clothing and footwear which accounted for 30% and 13% of rural and urban total cash expenditures (HBS 1976/77). It has also been found maize, roots and tubers, and pulse and seeds dominate food expenditures for people in the lowest quintile accounting for more than 50% of the total food expenditure (World Bank 1995, Sarris and (1993). This type of foods could be classified as interior goods which their demand decreases as income rises. Furthermore, Sarris and van den Brink (1993) show that the rural-low-cash expenditure groups depends more on subsistence consumption.

STRUCTURE OF HOUSEHOLD INCOMES:

In the rural areas, about 57.7% of the total food consumption in 1993 came from own production compared to 5% in Dar es Salaam (World Bank 1995) and 48% in 1976/77 (Sarris & van den Brink 1993). HIV/AIDS is more likely to affect time allocated for home production, hence, affecting the food production and ultimately rural population nutrition (Over et al 1995). To the poorest in the urban areas who have low incomes who about 49.9% depended on salaries and wages (Sarris & van den Brink 1993) and depend less on own food production, the situation is likely to be worse compared to the rural residents.

The distribution of poverty by location show that, although the rural population incomes have grown overtime, about 92% of all poor

incomes are more likely (five times) to be poor compared to people who receive a wage.

Comparing both per Capita and adult equivalent income for the years 1983 and 1991, it appears that rural incomes have grown substantially since 1983. Rural Adult Equivalent income was Tshs 17,986 Tshs in 1983 (1991 prices) and Tshs 56, 969 in 1991, and per Capita income was Tshs 12,181 and Tshs 36,252 respectively (World Bank 1995). Although such developments have been attained individuals suffering HIV/AIDs related episodes have been shown to spend more than their per capita income on treatment (Over and Mujinja, 1995).

Table 5: Percent of Total Income Accruing to each quintile

	All Tanzania	Rural	Urban	Dar
Poorest 1	6.8	7.7	7.3	7.4
2	11	12	11.4	11
3	15.1	16.3	15.6	14.9
4	21.6	22.4	21.2	21.4
Richest 5	45.4	41.6	44.5	45.4
All	100.0	100.0	100.0	100.0

Source: World Bank (1995)

*Each quintile has 20% of the population

DISTRIBUTION OF INCOMES:

Poverty is measured in different ways. The ranking of households below a 'poverty line' also has to be decided either to use an incidence measure or the depth of poverty. The extent of poverty also depends not only on the percentage of households below the poverty line and but also on how far below the poverty line the

which takes into consideration different sizes of households and composition of different needs. The studies also controlled for regional differences in prices. They found a poverty line of Tshs 46,173 for the whole country and Tshs 31,000 (in 1991 prices) for Kagera respectively. (see table 6 below).

Table 6: Poverty Lines and Poverty Incidence, 1993

Poverty Lines in 1991 Tshs	Price variation (average year)	Poverty Lines 1993 Tshs	Poverty Line in US \$	Head count Index
31,000	26.5	49,600	100.2	4.4
46,173	26.5	73,877	149.2	16.9
46,173	34.2	83,111	167.9	22.3
46,173	41.4	92,346	186.6	34.2
		114,187	230.7	41.6
		128,109	258.8	50.0

Source: World Bank (1995)

In the above poverty line from different sources in 1991 are adjusted for different levels of inflation. In 1991 about 51.1% of the population were below the poverty line. In 1980 International labor office (ILO 1982) estimated that in urban areas only about 15% of households might be considered as falling below the poverty line and about 25-30% for the rural areas with a countrywide total of about 25%.

Kigoda and Mwisomba (quoted in World Bank 1995) estimate poverty line of Tshs 63,000 and the poverty in 1994 to be 42.7% in Mainland Tanzania, 49.7% in rural Tanzania, 24.4% in other urban towns, and 2.9% in Dar es Salaam.

Table 7: Poverty Measures by Location and Poverty Line

Location	Poverty Line	(Incidence) Head Count	Depth
Rural Tanzania	Tshs 114,187	49.7	15.7
	" 83,111**	27.8	6.9
	" 73,877***	21.2	4.7
Urban Tanzania	Tshs 114,187	24.4	6.1
	" 83,111	9.9	2.22
	" 73,877	6.9	1.45
Dar es Salaam	Tshs 114,187	2.9	0.38
	" 83,111	0.21	0.06
	" 73,877	0.21	0.04
Tanzania Mainland	Tshs 114,187	41.6	12.7
	" 83,111	22.3	5.5
	" 73,877	16.9	3.8

Source: World Bank 1995

*The core poverty line of Tshs 46,173 inflated by 60%

**The core poverty line of Tshs 46,173 inflated by 80%

***1994 poverty line estimated by Wagao

Using different inflation rates, more than 20% of the rural population falls under the poverty line, and only more than 7% and less than 25% of the urban areas. In general the country has about 17% of its population are below the poverty line with different depth of the depth of poverty (poverty gap). Using Tshs 114,187 as the poverty line it means that a rural person needs a transfer of Tshs 17,927 ($.157 \times 114,187$) per year to eradicate the rural poverty.

REGIONAL INCOME AND POVERTY DIFFERENCE

Table 8 below need to be interpreted with caution. The National count for Tanzania counts Kilimanjaro as one of the poorest regions but this could be because per capita measure is based on population and Kilimanjaro is one of the densely populated areas and most of the people depend on the land for their incomes. Having a small plot is in most cases could be associated with a probability of having a low volume of output (if other conditions are taken constant) and hence low income. All in all, there was a large

coefficient of about 0.2. The other difference is that, Sarris and van den Brink (1993) using the 1976/77 national Accounts data classified Tabora, Kigoma and Morogoro as among the eight regions with a high per capita income, the World Bank (1995) classifies them to be among the six regions with a low per capita income.

Table 8: Incidence of poverty levels and Per Capita. Income by Region.

Region	Head count Soft-Core Poverty 1993	Rank in 1991 (1 is poorest)	Rank in 1993 (1 is poorest)	Rank in 1993 GDP per Capita (1 least income)	Wealth (High wealthy)	Poverty Index (low less poverty)
Dodoma	36.9	8	3	4	7 (9)	50 (9)
Arusha	25.1	16	6	16	25	38
K'njaro	6.1	19	17	8	21	35
Tanga	24.4	15	7	12	4	52
Morogoro	20.2	6	10	14	3	56
Coast	7.7	13	15	9	10	46
D'Salaam	0.2	20	20	20	35 (1)	30 (1)
Lindi	27.1	2	4	3	2 (17)	69 (18)
Mtwara	25.8	9	5	13	2	83
Ruvuma	22.4	4	9	18	3	57
Iringa	17.2	14	11	19	5	61
Mbeya	7.8	12	14	15	11	50
Singida	23.3	10	8	5	18	47
Tabora	14.6	5	12	10	4	52
Rukwa	41.3	11	2	17	3 (16)	68 (18)
Kigoma	42.6	3	1	6	1 (20)	60 (16)
Sinyanga	10.1	1	13	11	4	52
Kagera	4.0	18	18	1	3	52
Mwanza	7.3	7	16	7	24	47
Mara	2.9	17	19	2	27 (2)	45 (4)

Source: World Bank 1995, National Accounts of Tanzania 1976-1993.

INCOME INEQUALITY

Inequality (in terms of Gini Coefficient measure) has continued to increase since 1969. A household survey in 1976/77 showed an increase of a Gini Coefficient of 0.44 (Household Survey 1976/77), the World Bank (1993) found a Gini Coefficient of 0.57 in 1991. The trend changed a little bit in 1993 when the HRDS survey showed a reduction in the Gini Coefficient to 0.41 (World Bank 1995, Sarris and van den Brink 1993). 9 below show the incidence of poverty in Tanzania for 1991 and 1993 using income and expenditure measures, where the urban areas inequality difference has decreased since 1969, than that of the rural areas and Tanzania in general continues to increase.

Inequality of income in Tanzania has increased compared to the situation in 1996. Although it went down from a Gini Coefficient of 0.57 in 1991 to 0.41 in 1993, the inequality is still higher compared to the 1969 situation.

GENDER AND INCOME DISTRIBUTION

Table 10 below show that, female headed households were likely to have high dependency ratios, fewer acres of land, few livestock and fewer years of schooling (of the head). Landholding and livestock keeping are in most cases rural investments, hence, rural women were more likely to have fewer assets than their male equivalents. However, on average, single women were more likely to have more years of schooling compared to households where males were heads.

Table 9: Gini Coefficient for the distribution of Income in
Tanzania, 1969-93

	1969 ^(b)	1976/77 ^(b)	1983	1991 ^(a)	1991 ^(b)	1993 ^(b)
	(1)					
Rural	.30	.37	.52	.72	.60	.35
Urban	.51	.46	N.A	N.A	.46	.42
Tanzania	.39	.44	N.A	N.A	.57	.41

a) using Income

b) using Expenditure

Source: World Bank 1995

Table 10: Distribution of Assets by Gender of Head.

Household type	Dependency Ratio	Land in Acres (rural)	Livestock Index(rural)	Years of School
Male Head	1.16	6.08	510	4.74
Female Head	1.37	1.37	197	2.45
Female-Divorced/ Separated	1.42	3.92	132	2.59
Female -Only Adult	1.91	2.94	56	3.49
Female Single	1.14	2.28	17	6.32

Source: world bank 1995.

Overall about 12.2% of all households in Mainland Tanzania are headed by a woman (11). In 1976 Household Budget Survey found that 11% of all households were headed by women. Female - headed households are more common in urban areas. This could be due to the cultural reasons that in some tribes in Tanzania women are not supposed to inherit any assets (land and others) from their husbands and or their parents. A death of a husband is likely to be one of the main factors which could exacerbate the poverty of women headed households were the assets and investments, in absence of protective inheritance laws are likely to be grabbed by the deceased relatives.

Because they live dis-proportionately in urban areas, female - headed households are more frequent in upper than in lower income quintiles and are also, on average wealthier than male-headed households (World Bank 1995). Furthermore, comparing income by

different locations shows that female-headed households are wealthier than their male equivalents in rural areas and urban areas excluding Dar es Salaam but they are poorer than their male counterparts in Dar es Salaam (World Bank 1995). Other indicators like asset holdings and educational attainment suggest that women have lower welfare levels than men.

Table 11: Prevalence of Female-Headed Households

Category of household	INCOME			LOCATION		
	Poorest	Better-off	ALL Tanzania	Rural	Urban	DSM
Female headed	10.9	15.3	12.2	10	17.6	14.8
Female headed Divorces/Separated	2.8	4.1	3.9	3.2	5.4	5.5
Female headed and Women only adult	1.8	7.7	4.2	3.3	6	6.8
Single Female head	1.1	3.4	1.57	.9	3.0	2.8

Source: World Bank 995.

LAND OWNERSHIP AND INCOME DIFFERENTIATION

Collier et al (1986) showed that income differentiation between rural poor and non-poor could be traced to differences in ownership of assets. However, the size of landholding did not appear to be highly associated with income differences. This can be expected in a land-abundant economy, such as that of Tanzania (Sarris and van den Brink 1993). Collier et al (1986) also show that the difference in incomes could be associated with the ownership of livestock since, livestock is a main forms of investments. It was also seen that access to wage employment wa a major explanatory factor of non-farm income in rural areas.

Bevan (1990) have also shown similar results that the size of land holding was not strongly associated with total per capita income among rural households. The per capita total income (cash and subsistence) from food and cash crops in households operating very small land holdings was never less than half the per capita income of households operating landholding 10 or more times larger. \Per capita income deriving from non-farm sources, however, including own-business and wages, was much larger in households operating smaller land holding.

PRICES

The rises in prices of different consumption goods in the last two decades with a slow increase of disposable incomes of Tanzanians, have contributed to the decrease in the relative purchasing power of the people. Parallel market prices rose steeply in the end of mid-1970s in response to the official marketing system and remained at approximately the same high levels until the government relaxed enforcement of the official marketing channels in 1984 (Sarris and van den Brink 1993).

The inflation rate has ranged between 10 and 35% in the last two decades. The liberalization of the economy has been reported to have had contributed to the decrease in prices in recent years (BOT 1996). However, there is evidence that salaries and wages of workers and the producer prices have been increasing with the a faster pace than the increase in inflation causing an erosion on the purchasing power of the people. There is evidence that, in real terms, the incomes of the people have not matched with their consumption needs. Some very crucial consumption items which were provided free by the government before, such as, education and health, now, people have to pay for them. This has been demonstrated in this paper that education and health were not dominating a larger part of the peoples' expenditure patterns before 1993.

CONCLUSION

The per capita income of Tanzanians has been declining since the last two decades although the rural income have grown substantially since 1983. The wealthiest control most of the Tanzanian total income. In 1993 the poorest households were those who had income below a poverty line of Tshs 46,173, most of them coming from the rural areas hence making poverty to be a rural phenomenon. Households of big sizes are likely to be more poor than those with smaller sizes. The bigger the dependency ratio the high the likelihood of being a poor household.

The poorest households seems to spend low on consumption goods with a consumption expenditure quite close to total expenditure implying that they have low propensity to save. However, women headed households are not more prone to poverty compared to their male equivalents.

The inequality in terms of Gini Coefficients has continued to increase since 1969, most of the incomes concentrated in the riches 20% of the population. In 1991, about 51% of the population were below the poverty line, most of them being residents of the rural areas. There has been a great disparity of the incidence of poverty from one region to another and the non-export oriented regions have been the ones with a higher incidence of poverty.

This paper shows that apart from the young age groups who are the "window of hope" an attention for the control of HIV/AIDS should paid on the poor, who let alone that they may not have enough

resources of caring for the sick, but also more likely to be ignorant of the transmission dynamics of the disease.

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