

Paths Out of Poverty in Ghana and Tanzania in the 1990s

Trudy Owens
University of Nottingham.

Francis Teal,
Centre for the Study of African Economies
University of Oxford.

March 2005

An Overview

In this paper we address a range of questions as to how the falls in poverty in Ghana and Tanzania in the 1990s were effected and the effects of economic reforms on different types of household.

Did private wage employees suffer from the trade liberalisation policies that characterised both economies in the 1990s?

In Tanzania it is clear that the answer to this question is no. Households headed by a private wage employee saw rises in excess of 30 per cent in household expenditure per capita and the proportion of households headed by a private wage employee rose.

In Ghana the answer is less clear cut. Household expenditure per capita for households headed by a private sector wage employee rose by 15 per cent but the proportion of households headed by such employees fell over the decade.

How did the reforms in the public sectors implemented over the period affect households headed by a public sector employee?

In both Ghana and Tanzania the proportion of households headed by public sector employees fell - by 6 and 13 percentage points respectively. By this measure policy in Tanzania was much more successful at cutting back the size of the public sector than Ghana. In both countries expenditures per capita rose - by 15 per cent in Ghana and nearly 30 per cent in Tanzania. By this measure public sector headed households fared much better in Tanzania than Ghana.

Did relatively poorer households benefit from growth?

For both countries the answer to that question is yes. There is an important qualification for Ghana. Most farming households, who are on average the poorest group, saw falls in expenditure per capita over the decade.

Where did new employment opportunities come from?

In Tanzania the answer is from the private sector generally. In Ghana the answer is urban self-employment.

What are the implications for policy towards poverty from the comparison between the two countries?

The impact of growth on poor households was much more uniform in Tanzania than Ghana because policy outcomes in Tanzania were far more pro-rural than was the case in Ghana. In both countries average expenditures per capita for rural households are about 60 per cent of those for urban ones.

1. Introduction

In both Ghana and Tanzania reports based on representative samples of households have shown that poverty fell in the 1990s. The Tanzanian Household Budget Survey 2000/01 used surveys from 1991 and 2000, nearly a decade apart, National Bureau of Statistics (2002). In Ghana there have been four households surveys carried out over the period from 1987/88 to 1998/99, Ghana Statistical Service (1995, 2000). The reports provide profiles of the correlates of poverty at a point in time and some comparisons over time. In this paper we use the data drawn from these surveys to compare how the fall in poverty was effected in the two countries. Both countries are regarded as relatively successful reformers over the 1990s with the reform process in Ghana under way from the mid 1980s. Comparing the two countries offers the opportunity to see if the processes of poverty change were similar and what we can learn about policy outcomes for the poor. From existing research we know that income opportunities for people living in developing countries are determined by a range of factors which include whether individuals have wage or non-wage opportunities, the income opportunities from self-employment, whether they live in rural or urban areas and the level of education attained.¹

In this paper we seek to identify some of the paths by which households may have exited, and entered, poverty. As the samples are representative surveys, not panels, we cannot ask which individuals escaped poverty, we can however ask which types of household escaped poverty. We do this by two methods. First we show how averages of household per capita consumption changed over the decade for both countries for four classes of household: farmers, the urban self-employed, private and public wage employees. Second we use the growth incidence curve (GIC) as in Ravallion and Chen (2003) to ask how the poor within each of these household types benefited from growth. The declines in poverty reported for both Ghana and Tanzania are based on averages across these households. By our decomposition we can show how this varied across types of household.

As will be apparent from the analysis of our data wage employees and the urban self employed not only have much higher levels of expenditure than farmers, they also saw substantially greater increases in expenditures than farmers. Thus one possible path out of poverty is that there is a relative expansion of urban based employment opportunities. A prominent concern with policies of trade liberalisation in Africa has been that it will lead to a decline in employment in the traded manufacturing sector. While we do not link our data with the traded sector we do seek to show how income growth was divided between shifts between types of household and the differential growth rates across household types. We do this by means of a simple decomposition:

¹ This list is not intended to be exhaustive. Much attention has focused on whether households have access to, or can acquire, assets in the form of land or finance, and their ability to withstand shocks. We do not investigate these dimensions of escaping poverty in this paper.

$$[1] \quad Y_t = \sum_{i=1}^4 P_{it} Y_{it}$$

where Y_t is average expenditure per capita at time t , P_{it} is the proportion of households of type i , and Y_{it} is the average expenditure per capita at time t of household type i . We can express the changes in expenditure per capita over time as:

$$[2] \quad \Delta Y_t = \sum P_{i0} \Delta Y_{it} + \sum Y_{i0} \Delta P_{it} + \Delta Y_{it} \cdot \Delta P_{it}$$

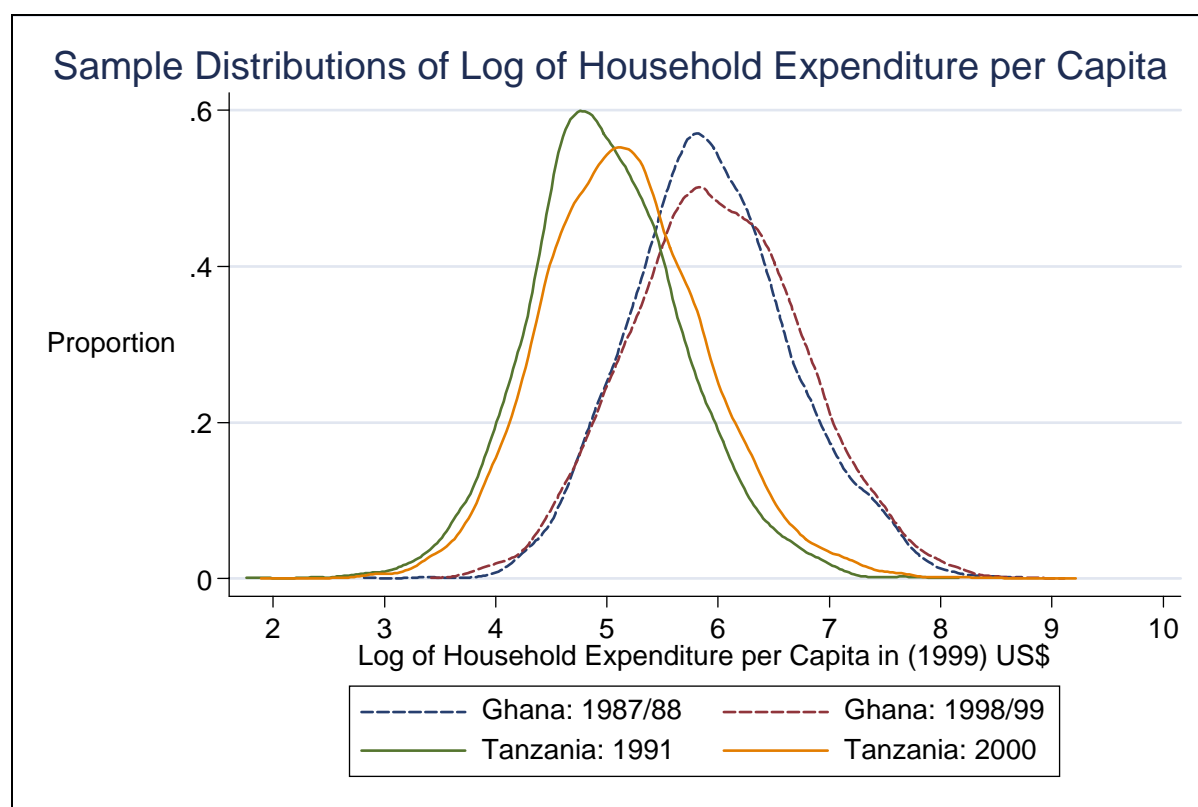
This identity enables us to assess the relative importance of movement between occupations and of rises within an occupation as the source of growth in the economy. We term the first part of the expression $\sum P_{i0} \Delta Y_{it}$ the change in expenditure, the second part $\sum Y_{i0} \Delta P_{it}$ the change in proportions and the third part $\Delta Y_{it} \cdot \Delta P_{it}$ the interaction effect. By definition the average growth rate across the households is the sum of these three components.

In the next section we show how the average level of household consumption per capita in the two economies grew over the decade of the 1990s. In section 3 we ask which types of household benefited most from this growth. The issue of the decomposition is taken up in section 4. A final section summarises the findings.

2. Average Growth in the Economies

Figure 1 shows the distribution of the log of per capita household consumption for both countries for the first and second surveys we are analysing. Table 1 shows the summary statistics of the data on which the Figure is based. The patterns are very similar in that both the distributions are clearly close to being log normal and there is some increase in the means. The growth rates are very similar with that for Ghana being 9 per cent for the 11 year period from 1987/88 to 1998/99 while that for Tanzania it is 11 per cent for the 9 year period from 1991 to 2000. These growth rates are very low.

The data shown in the figure is in 1999 US\$, no conversion has been made for purchasing power parity. These figures have been derived from constant price domestic figures. The conversion to US\$ uses the exchange rate for the base period for the prices which is 1998/99 for Ghana and 2000 for Tanzania.

Figure 1**Table 1: Summary Statistics for the Log of Household Expenditure per Capita in (1999) US\$**

	Number of Observations	Mean	Standard Deviaiton	Minimum	Maxmimum
Ghana 1987/88	2963	5.94	0.73	2.82	8.73
Ghana 1998/99	5465	6.03	0.80	3.42	9.11
Tanzania 1991	4459	4.83	0.68	1.76	8.16
Tanzania 2000	19890	4.94	0.68	1.89	9.21

Thus the growth rates shown are not affected by any changes in international prices or changes in the real exchange rate. The Figure shows a substantial difference in per capita consumption, expenditures in Ghana are three times those in Tanzania. This may reflect a range of factors which we do not investigate as our primary interest is in comparing changes over time within each country. We leave to later work understanding the sources of the very large differences in per capita consumption across the countries implied by the data.

It is apparent from the Figure that any decline in poverty in the sense of the headcount measure will be much clearer in Tanzania than in Ghana. For Tanzania the distribution clearly shifts so that at all

income levels below the mean the proportion earning any given level of income has fallen. For Ghana the distributions cross at low levels. Finally the standard deviation of the distribution increases for Ghana but not for Tanzania. We note that this is not necessarily inconsistent with the published reports as our data is confined to households headed either by a wage employee, the self-employed or farmers: there is a residual category excluded from our analysis which is included in the summary statistics in the reports. We turn now to a consideration of who benefited from the growth.

3 Which Households Benefited from Growth?

The top part of Figure 2 shows the levels of household expenditure per capita at the beginning and end of the decade for our four types of household: farmers, private and public wage employees and the urban self-employed. The bottom part of the Figure shows the growth rates over the decade from the data presented in the top part. As we have just shown how close to log normal are the underlying distributions we have chosen to present exponents of the means of the logs to keep the data in Figure 2 as comparable as possible with that of Figure 1.

Figure 2 shows that the level of household consumption per capita rose from US\$ (1999) 379 to 420 for Ghana and from US\$ (1999) 147 to 164 for Tanzania, growth rates of 10.8 and 11.6 per cent respectively. Four findings stand out. First, while the averages are virtually identical across the two countries there are very marked differences in the pattern of growth within this average both within and across the countries. Second, farmers - the poorest type of household - did least well in both countries. In fact in Ghana per capita consumption of farmers fell. Third, while in both countries wage employees did much better than farmers, they did less well than the urban self-employed in Ghana. Finally, despite the higher growth rate for the urban self-employed in Ghana their levels of per capita consumption remain below those of wage employees in both countries.

It is clear from Figure 2 that focusing on the average expenditures of the four types of household we have identified from the data that in both countries the poorest type - the farmer- grew least. Does this imply that the poorest percentiles of the distribution see falls in their per capita consumption? To answer that question we show in Figure 3 the GIC for Ghana and in Figure 4 the GIC for Tanzania. (We combine private and public wage employees to prevent the bottom figures from being too cluttered). These two Figures confirm the very important differences across the two countries. While the top part of the Figure for both countries indicates that on average there was growth across all percentiles, the bottom part of the figure shows that this was not true for farmers in Ghana.

In Ghana the self-employed do as well or better than wage employees for much of the distribution, particularly at the higher end. In contrast the self-employed in Tanzania do less well than farmers for much of the distribution and their median growth rate is close to zero.

Figure 2

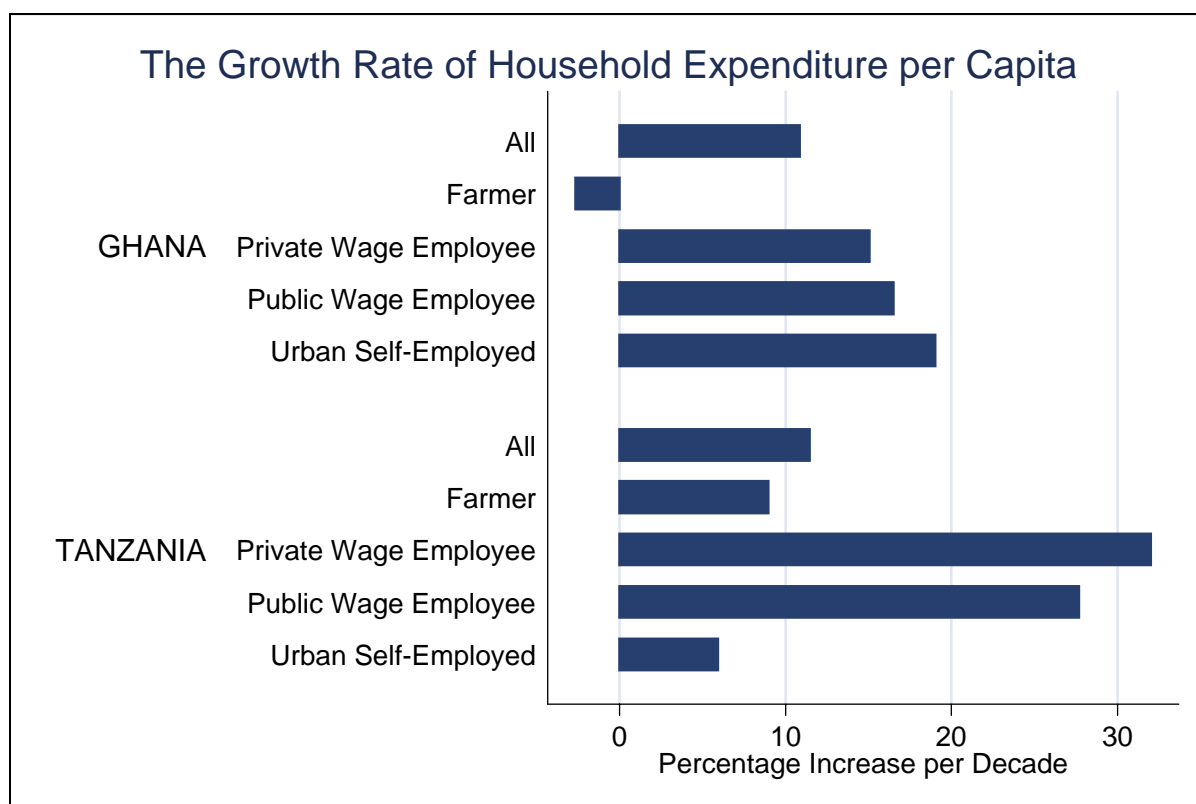
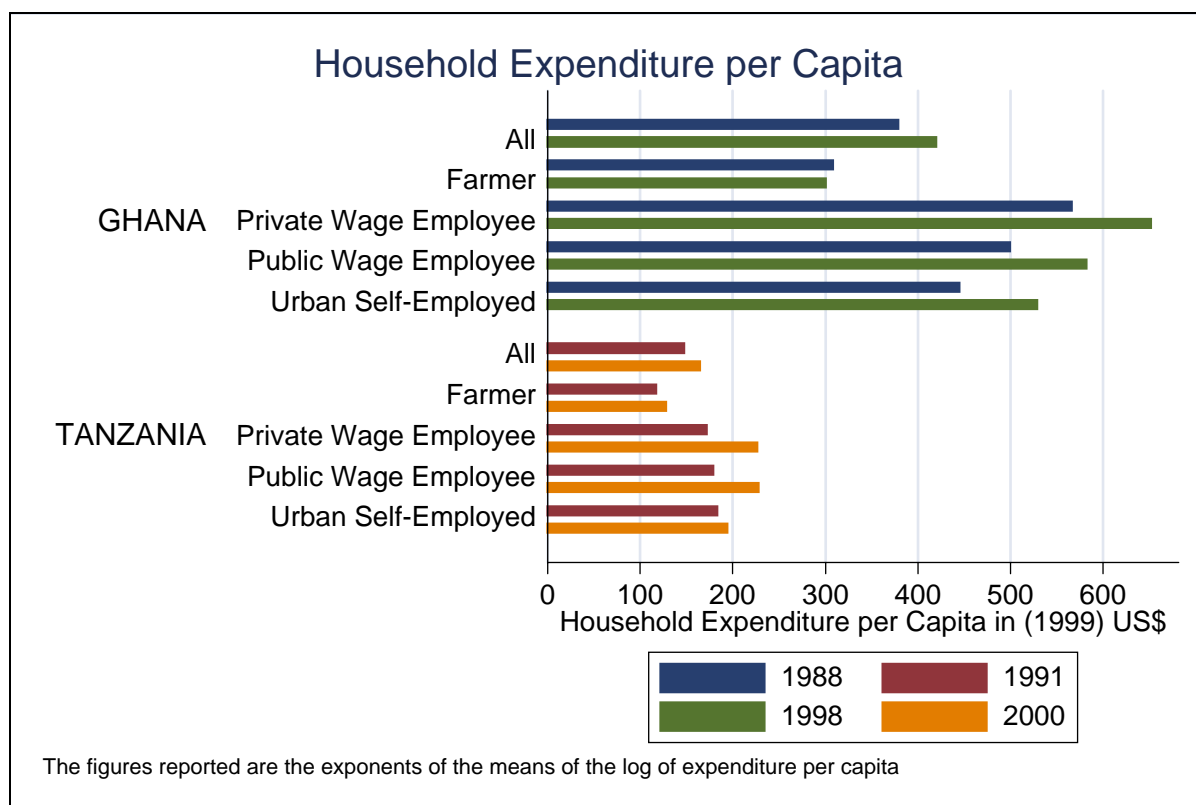


Figure 3: Ghana

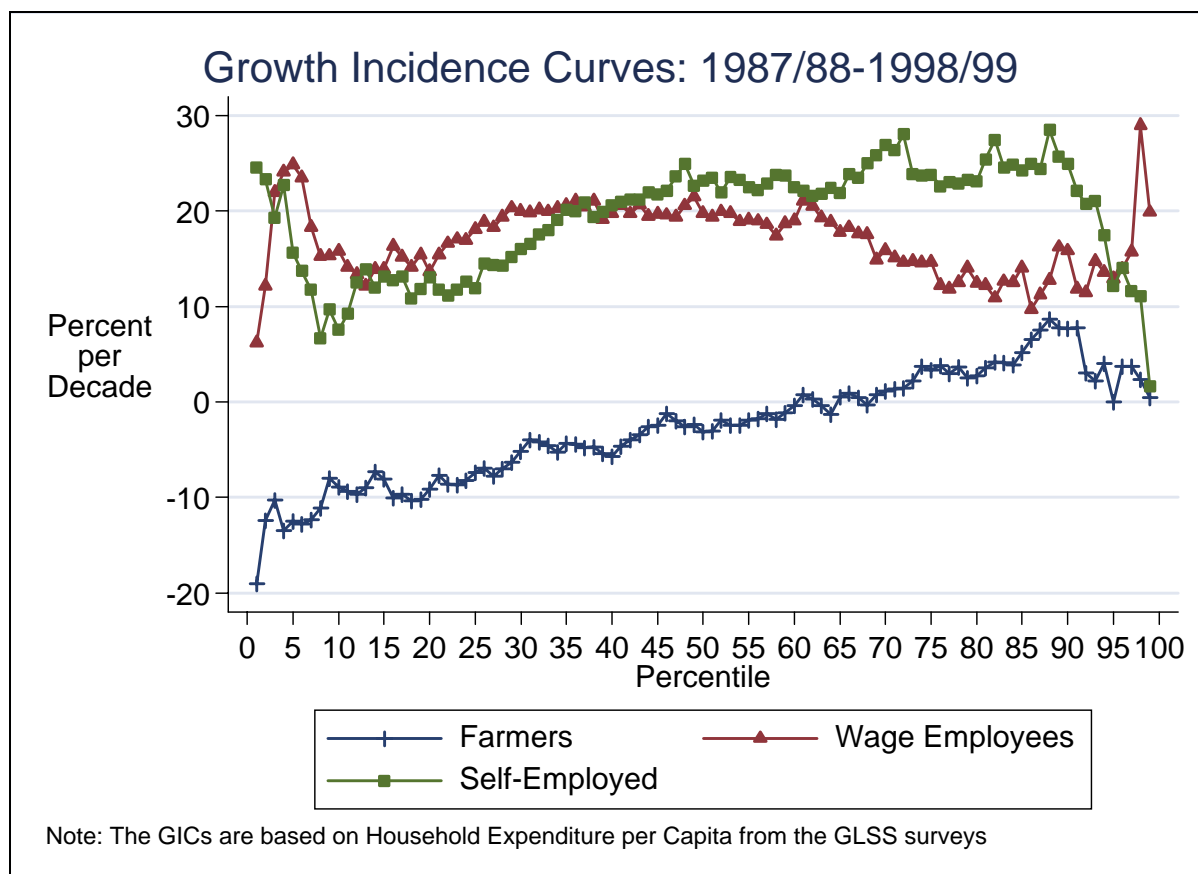
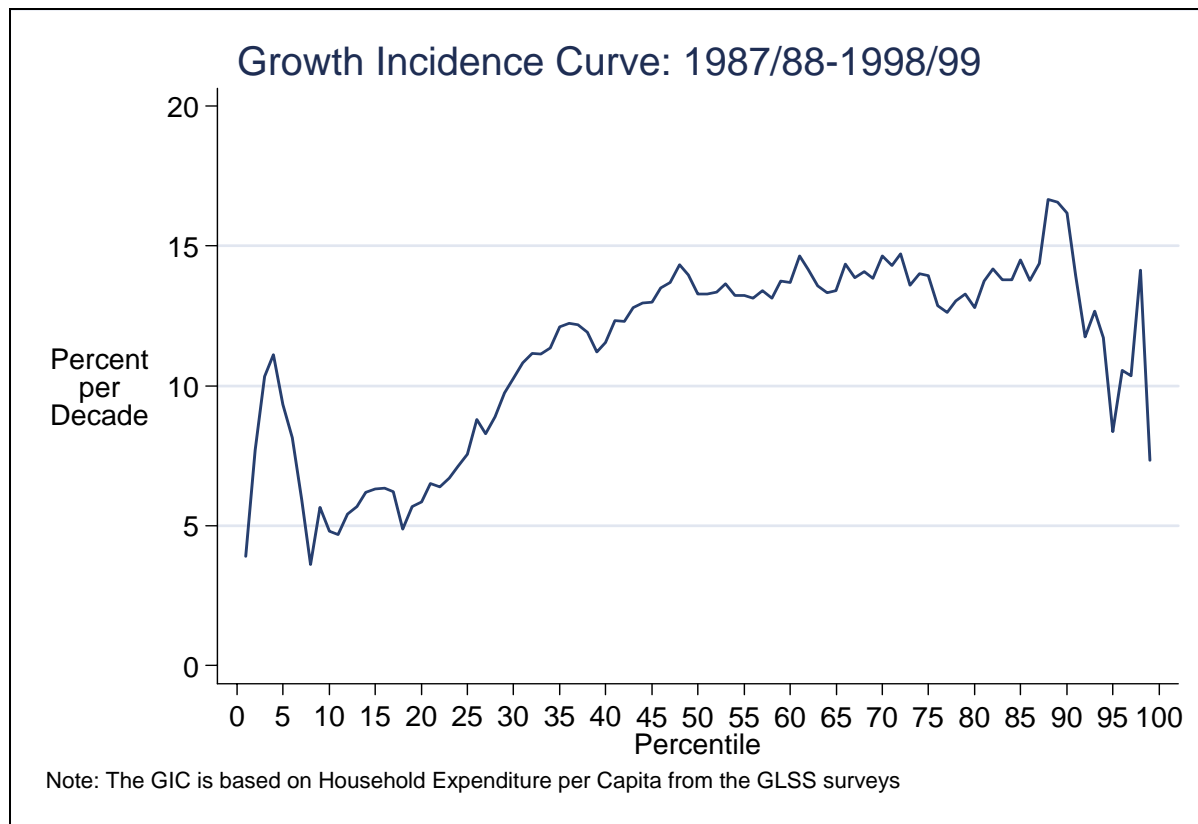
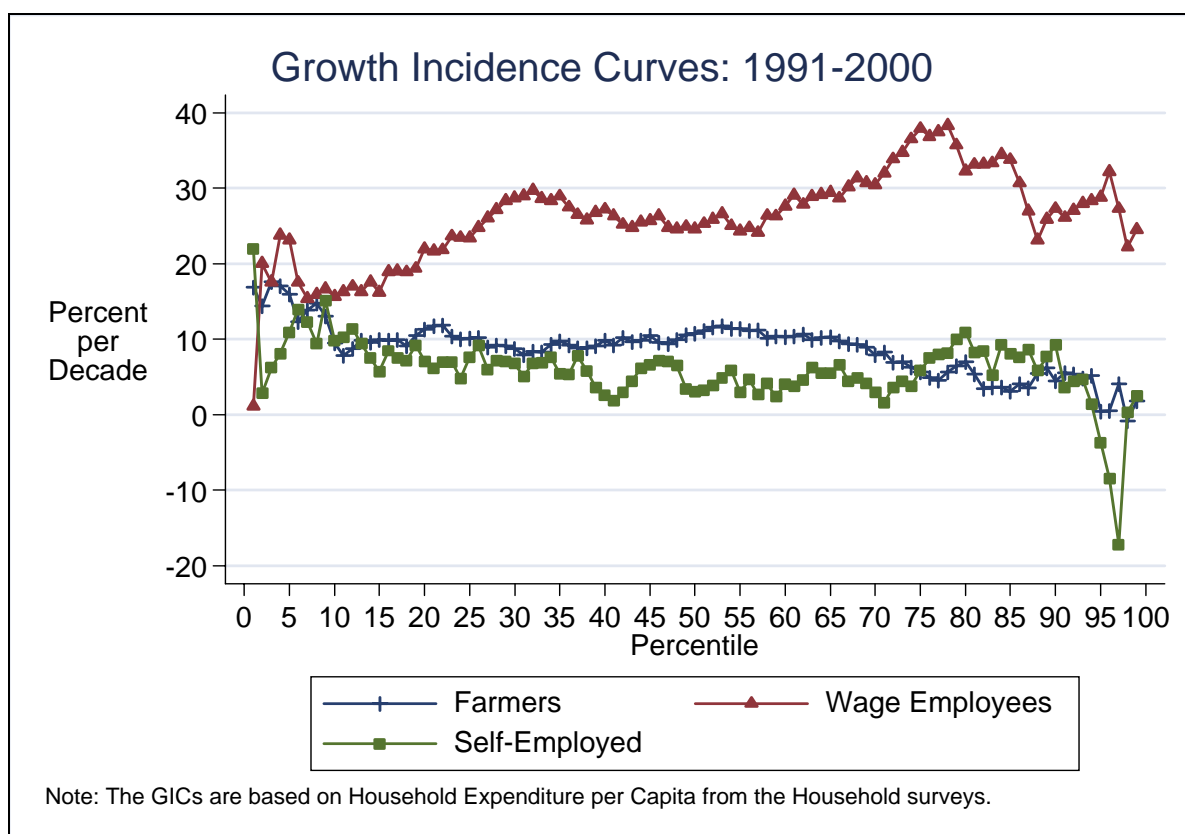
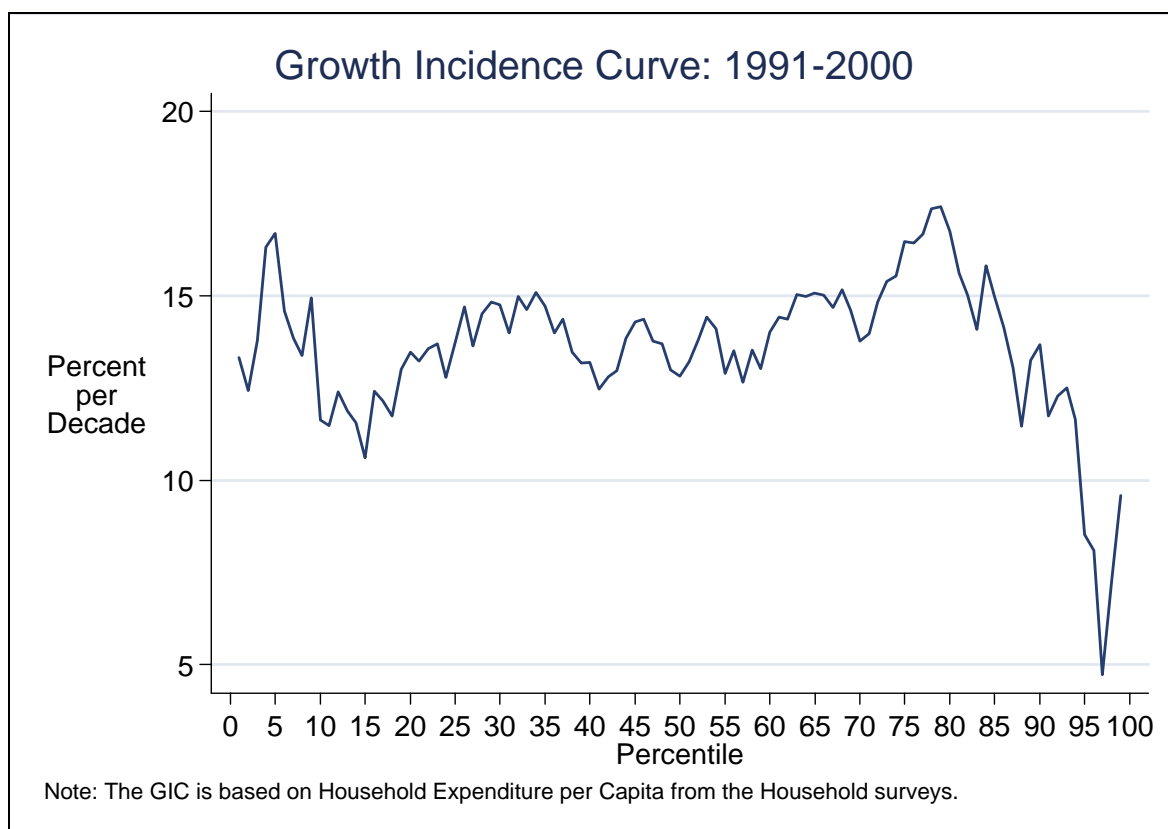


Figure 4: Tanzania



There are also important differences across the countries in the pattern of the growth rate for wage employees. In Tanzania there is a general pattern for wage growth to rise as we move up the distribution. In fact after the 30th percentile wage increases reach nearly 40 per cent. There appears some evidence that not only are wage earners in Tanzania doing relatively well over this period but that the largest gains are being made by those relatively well off.

Finally we note how low are these figures when compared with a rapidly growing economy such as China. Ravallion and Chen (2003, p.) present a GIC for Chinese income per person. The median growth rate is 5.5 per cent *per annum* which compares with about 12 per cent *per decade* for Ghana and Tanzania. China's income grows every two years by the amount Ghana and Tanzania's grow every decade. While the analysis has identified important differences in the pattern of growth within these economies the important common factor is that growth is far too low to have any major impact on poverty in the next decade or so.

4 A Decomposition of the Growth Rate

So far we have focused on how growth differed across different types of household, classified either by the occupation of the household head or by their position in the distribution. We turn now to ask how important have been changes in the proportion of households in the different occupations. One theme in policy reform across the two countries has been the need to contract the public sector and to promote the growth of the private. Has the public sector declined over the 1990s? The answer shown in Figure 5 for both countries is that the proportion of households headed by an individual with a public sector wage has declined. Has private wage employment grown? Again as a proportion of the total number of households private sector employment has fallen in Ghana and risen in Tanzania. These figures of course are not the number of jobs simply the proportions of households headed by either a public or private wage employee. The most important change in Ghana has been the growth of households headed by the urban self-employed. In fact this occupational type is the only one to expand, both farmers and wage employment generally has contracted (again as proportions not as absolute numbers).

In Figure 6 we show the decomposition of the average growth rate between that part due to the change in the proportion of households in each occupation and what we termed above the change in expenditure.² It will be seen from Figure 6 that the change in the proportion has a small negative effective on the average growth rate. In Tanzania this primarily reflects the fact that the contracting occupation was public sector wage employees who are in a relatively high income class. In Ghana while the public sector also contracted, so did farming which is the lowest income class. It is clear that both the change in proportions and the interaction effect only have a small role to play in the decomposition of the average

² It will be noted that the growth rate shown in Figure 6 differs from that in Figure 2. In Figure 2 we use weights which is not possible for the calculation shown in Figure 6.

growth rate. It is the change in expenditure, holding proportions constant, which is by far the most

Figure 5

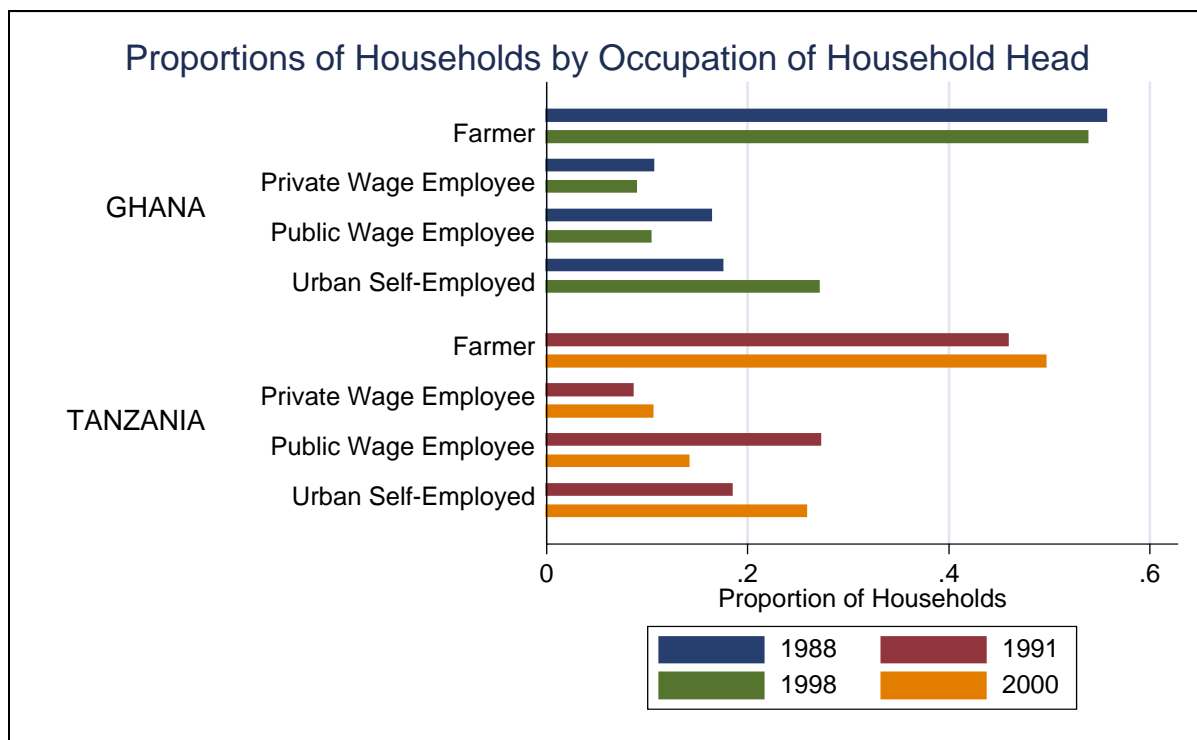
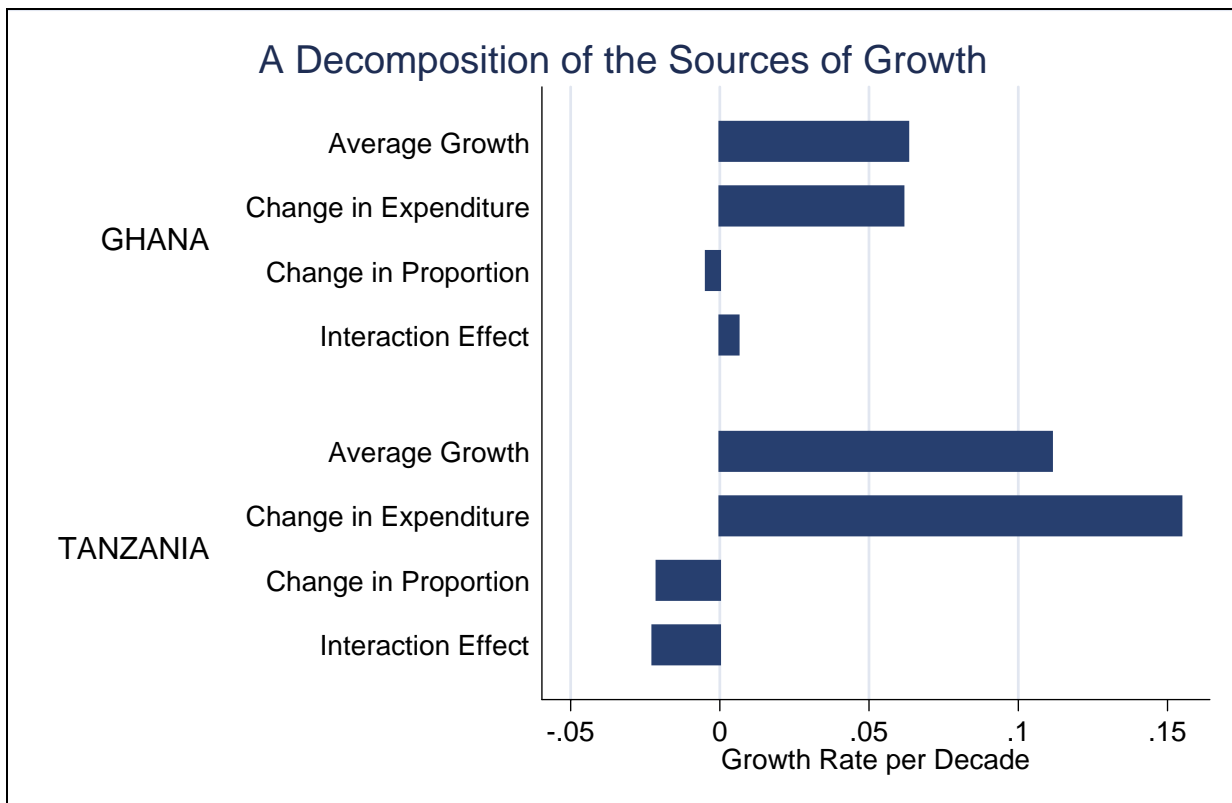


Figure 6



important component in this disaggregation of the average growth rate.

5 Summary

In this section we summarise the main findings from the comparisons we have carried out between Ghana and Tanzania. The most striking similarity across the countries is that the average growth rate was almost identical at about 10 per cent *per decade*. This compares with an average growth rate in China over the same period of 5 per cent *per annum*. Ghana and Tanzania have in common very low growth rates in household expenditure per capita over the 1990s. Clearly such growth rates make any substantial reduction in poverty difficult and as the Reports show the declines in the poverty measures have been very modest.

In seeking to understand how this average growth rates was achieved we took two steps. The first was to look at the expenditure per capita of four types of households: farmers, the urban self-employed and private and public wage employees. The second was to ask if the growth was the result of growth within these categories or of changed proportions across the types of household. While there was some change in proportions this was not an important source of growth, by far the most important sources of growth were within the types of household and this was a common finding for both countries.

While the overall average growth rates were very similar there were very marked differences across the two countries in the growth rates within types of household. In Tanzania growth was driven by the growth of expenditure in households headed by a wage employee who are the richest households. In Ghana the highest growth rates in expenditure were among the urban self-employed who while richer than farmers were not, even at the end of the decade, as well off as households headed by a wage employee.

In Ghana the average expenditure per capita for farmers fell over the decade while in Tanzania all classes of households saw rises in per capita expenditure. The Growth Incidence Curve (GIC) analysis shows that for Ghanaian farmers all households below the 65th percentile saw falls in expenditure per capita. In contrast the GIC analysis for Tanzania shows that all percentiles of the distribution (we abstract from the figures for the top percentiles which are not reliable) for all types of households saw increases.

In summary in Ghana many farming households must have entered poverty over the decade while for all except wage earners in Tanzania exits would have been very modest.

References:

- Ghana Statistical Service (GSO) (1995) *The Pattern of Poverty in Ghana: 1988-1992*, Accra, November 1995.
- Ghana Statistical Service (GSO) (2000) *Poverty Trends in Ghana in the 1990s*, Accra, October 2000.
- National Bureau of Statistics (NBS) Tanzania, *Household Budget Survey 2000/01*, Dar-es-Salaam, July 2002.

Ravallion, M. and S. Chen (2003) "Measuring pro-poor growth" *Economic Letters*, 78, pp. 93-99.