Structural Transformation, Employment Creation, and Labor Markets: The implications for poverty reduction in sub-Saharan Africa
In his classic study of economic growth Simon Kuznets (1966) suggested generalised patterns of structural change which were an intrinsic part of the growth process.

Broadly the key patterns were:
- The rise of an industrial sector at the expense of agriculture,
- The growth of urban relative to rural areas
- The rise of factory based wage employment.

The problem was seen as one where the long run of almost zero growth was replaced through a series of stages to take-off, Rostow (1969), into sustained growth rate of some 2 per cent per annum.
Sustained Long Term Growth

Ln GDP per Capita in 1990 PPPUS$
Kuznets Countries: 1500-2006

Source: Angus Maddison, Historical Statistics of the World Economy, 1-2006AD
Given the time he was writing, it was the OECD countries that formed the empirical framework for this analysis and Figure 1 shows these countries (classified as Industrial) together with three more recent candidates for Kuznetsian growth – Brazil, China, and India. For all, there are very clear breaks in their trend growth rates and no sign that this process has not been sustained after the break. In the early 1800s for the industrial countries, for the latter 1800s for Brazil and after the 1970s for India and China. Figure 2 shows three examples of what I have termed non-Kuznetsian growth – sub-Saharan Africa (SSA) (which excludes South Africa), the Middle East and North Africa, and Latin America excluding Brazil. While there have been long periods of rising incomes, this growth has not been sustained in the same way as the pattern shown in Figure 1.
Wobbly Growth

Ln GDP per Capita in 1990 PPPUS$
Non-Kuznets Countries: 1500-2006

Source: Angus Maddison, Historical Statistics of the World Economy, 1-2006AD
Growth, Structural Adjustment and Employment

- It is clear that long run steady, and sustained, growth is not necessarily the norm.
- Many countries grow relatively fast and then either fall back or stagnate.
- The problem is not simply getting growth started it is keeping it going.
- Three questions then arise:
  - Is this failure to sustain growth related to whether or not structural adjustment is occurring?
  - Is it that without structural adjustment certain types of jobs are not getting created?
  - Is that failure to create jobs related to how closely linked growth is to poverty reduction?
Macro and micro economists and poverty

- A large intellectual effort by macro development economists has gone into explaining both growth and inequality.
- While there is some doubt as to whether they can explain either growth or inequality there is a broad consensus that the two are not closely related.
  - In which case growth and poverty reduction should be quite closely linked.
- A large intellectual effort by micro development economists has gone into finding out who are the poor.
  - They are those living in rural households, with a large family and little education.
- These micro economists tend then to think that investing in education and control of fertility and (possibly) increased urbanisation will reduce poverty.
- So: Is grow all you need?
Poverty Measures from Macro Data


- Poverty Rate
- GDP per Capita
Poverty Measures from Micro Data for sub-Saharan Africa

Comparing 1993 and 2001

Comparing 2001 with 2009
What explains these differences?

- There are several possible reasons why the two approaches can lead to very different views as to both the level of poverty and how it has been changing.
- The macro approach has the problem that it is measuring and modelling national income at the aggregate level.
- There are many problems with doing this within a country, particularly if the country is very poor, as much economic activity occurs in small scale informal markets which it is very hard for national account statisticians to measure.
- There are even greater problems with rendering these numbers comparable across countries which is the objective of the PENN world tables and which form the basis for the Maxim Pinkovsky and Xavier Sala-i-Martin analysis.
There are at least two reasons why the internationally comparable income numbers from the PENN project can be very different from the consumption numbers that emerge from the household surveys.

The first is that consumption and income within a county may move quite differently. One of the reasons countries may be slow growing is that the rates of returns on the investment in the economy are low.

A second reason why national income and consumption measures may diverge is due the importance of primary commodities in the exports of many poor developing countries particularly in Africa. The consequences of these booms depend very much on the nature of the product.

If it is an agricultural product where incomes accrue to small sale farmers the results will be very different from an oil boom where the government captures much of the gain from the increases in income.
Consumption (of the poor) and Incomes

- For both these reasons incomes may diverge from consumption so the premise of the macro approach – that income gains are reflected in consumption – is likely to be far from generally valid.
- In summary it appears that since 2001 poverty rates in SSA have been falling very modestly on the basis of the survey evidence. As Martin Ravallion (2010) has pointed out in his comment on the macro data falls in poverty rates do not necessarily imply falls in the number of the poor and if the survey data is correct then the number of poor in SSA will not have been falling.
- Thus a picture of some improvement since 2001 leaves us with an important question: why has the rather dramatic improvement in SSA growth rates since 1995 been reflected at best in only a modest fall in poverty rates?
- Is it that the growth has not been associated with the necessary structural change to create more skilled, wage based, manufacturing employment?
Structural Change in Agriculture

Share of Agriculture in GDP: 1960 to 2008

Source: World Development Indicators 2010. Shares are weighted by population. Sub-Saharan Africa excludes South Africa.
Structural Change in Non-Agriculture

Sectoral Shares in Non-Agricultural GDP: 1980 to 2008

Source: World Development Indicators 2010. Shares are weighted by population. Sub-Saharan Africa excludes South Africa.
Implications for Employment

- These patterns have implications for both employment growth and how far income growth translates into poverty reduction.
- The macro picture we have presented does suggest one possible interpretation of the employment issue in SSA.
- Growth has not been associated with the kind of structural change that creates higher income wage jobs in manufacturing.
- Employment there may be but jobs, by which is meant wage jobs employing the newly educated and young labor force in SSA, there are not.
- A common characteristic across SSA, China and India is the growing share of the service sector in GDP.
- While elements within this sector may be wage jobs it seems clear that in the context of SSA employment in this sector will be dominated by self-employment and in particular by own self–employment or very small scale enterprises.
In linking change in the structure of incomes to changes in the structure of employment the first divide is between rural and urban based employment.

The view that labor markets between rural and urban areas are segmented has played an important role in their analysis in how developed countries grow.

When seeking to compare incomes across those sectors the gaps looked very large and clearly it appeared something was required to explain these gaps. In an interesting recent study of migration within Tanzania, Beegle et al (forthcoming) find that rural-urban migration led to about a 30 per cent rise in per capita consumption appearing to confirm the crucial role of understanding differences in labor market outcomes related to location.
Segmentation or Unobserved Heterogeneity?

- There must be factors either limiting the gains from migration for some or raising their cost that led a selected group of individuals or households to migrate.
- It is the role that selection may play in labor market outcomes that is central to distinguishing two fundamentally different views of how labor markets work in developing countries.
- Is what we observe the result of segmentation or selection determined by unobserved heterogeneity?
- Not only is this question of importance for which theories are consistent with the data, it is also of great importance for policy makers.
Incomes in Rural and Urban Sectors

- In a recent study looking at the household surveys in Ghana and Tanzania, Owens, Sandefur and Teal (2011) show that with controls for the education of the household head, gender and household size, the gap in consumption per capita across households in rural and urban sectors was 40 per cent in Ghana and 22 per cent in Tanzania.

- In neither country was there any evidence this differential had changed over the period from 1988 to 2006 for Ghana and from 1991 to 2007 in Tanzania.

- It needs to be noted these differentials are with controls for education and household size which are assumed to be the major observables which account for differences in incomes across sectors.

- While the role of unobservables is undoubtedly of great importance, it does however seem to stretch credibility to breaking point not to think that these numbers imply that something about urban sectors generates higher returns to factors than rural ones in SSA.
# Consumption and Incomes in Ghana: Household Survey Data

<table>
<thead>
<tr>
<th></th>
<th>Consumption</th>
<th>Income</th>
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<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Growth 1988-1992</td>
<td>2.7***</td>
<td>1.8***</td>
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<tr>
<td></td>
<td>(0.84)</td>
<td>(0.58)</td>
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<tr>
<td>Growth 1992-1999</td>
<td>1.3*</td>
<td>0.75</td>
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<tr>
<td></td>
<td>(0.71)</td>
<td>(0.46)</td>
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<tr>
<td>Growth 1999-2006</td>
<td>3.3***</td>
<td>2.7***</td>
</tr>
<tr>
<td></td>
<td>(0.72)</td>
<td>(0.46)</td>
</tr>
<tr>
<td>Urban</td>
<td>0.353***</td>
<td>0.305***</td>
</tr>
<tr>
<td></td>
<td>(0.020)</td>
<td>(0.031)</td>
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<tr>
<td>Log HH size</td>
<td>-0.658***</td>
<td>-0.550***</td>
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<tr>
<td></td>
<td>(0.012)</td>
<td>(0.017)</td>
</tr>
<tr>
<td>Male</td>
<td>0.126***</td>
<td>0.310***</td>
</tr>
<tr>
<td></td>
<td>(0.019)</td>
<td>(0.037)</td>
</tr>
<tr>
<td>Education</td>
<td>0.017***</td>
<td>0.013***</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>Constant</td>
<td>5.693***</td>
<td>5.756***</td>
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<td></td>
<td>(0.022)</td>
<td>(0.015)</td>
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<tr>
<td>Observations</td>
<td>25843</td>
<td>25843</td>
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<tr>
<td>R-squared</td>
<td>0.043</td>
<td>0.484</td>
</tr>
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Robust standard errors in parentheses: 

- ** <0.01, ** p<0.05, * p<0.1
While it is clear that average incomes are higher in urban than in rural areas that does not imply that the incomes of labor differ across those sectors. In fact establishing what those differences in labor income are is a very difficult – for many reasons. However the one I want to focus on there is the growth in urban informality. The growth of such “informal” employment is seen as linked to the failure of structural change in SSA to translate into the firm based wage employment. However is it true that incomes from self-employment are lower than those from wage employment?
Differences within Urban Sectors

Ghana

Tanzania

Densities of Log Earnings (Ghana)

Densities of Log Earnings (Tanzania)
Rates of Return Within Sectors

- The results so far suggest two major points.
- The first is that it was far from clear that there are substantial differences in returns to factors across sectors relative to the differences within sectors.
- That of course is not to argue that incomes do not differ across sectors but that is due to the differential assets owned across sector and the returns on those assets.
- The second point is that these differences within sectors suggest that the problem posed for the prices of labor within sectors are as, or more, important than explaining differences across sectors.
- If this view of the importance of heterogeneity within sectors is correct it suggests that the policy problem is one of understanding the reason that differential returns exist within sectors rather than a focus of why they differ across sectors, if indeed they do.
Agriculture or Manufacturing?

- The problem in other words is not expanding manufacturing relative to agriculture it is in understanding the rates of return on investment within those sectors and the factors that prevent investment in high return activities.
- It is rather unlikely there will be one answer to that question but across the sectors the problem has the same form.
- Why do not the more productive firms or farms expand relative to their less efficient competitors?
- Why does a process of creative destruction not create a mechanism for rising productivity and incomes within sectors?
- A finding that is common across work on both firms and farms is that it appears that the rate of return on investment can be high but investment rates are low.
Why do we not see jobs being created?

- If high return activities exist in an economy and remain unexploited then the basic mechanism by which investment increases the capital stock and thereby the demand for labor – whether skilled or unskilled - is not operating.
- Indeed if this pattern of unexploited high return investment is characteristic of poor countries then the policy problem is not to increase investment resources but to understand the mechanisms which limit the use of current resources.
- It has been argued that such high return unexploited investments exist in both the rural and the urban sectors within SSA.
How are growth, structural adjustment and employment linked?

- Why has growth in SSA been so far from the pattern in other countries?
- Firms and farms in SSA have failed to adopt technologies that offer higher incomes from the ownership of both labor and land outside of the mining sector.
- Such a failure would not be puzzling if the technologies with higher returns did not exist but there is a large body of evidence now pointing not only to their existence but the apparent unwillingness of farmers and firm owners to adopt them.
- It is unlikely that the same explanation holds in all places so the existence of numerous explanations may simply reflect the diversity of reasons why apparently high return investments do not get adopted.
- While the reasons may be diverse it can be argued that the consequences are common across the countries of SSA. The underlying driver of higher income growth for the non-mineral sector in these economies is missing.
Structural adjustment and reducing poverty

- If this is a correct way of looking at the problem then the focus on structural adjustment is to mistake the consequence of a successful growth policy with its cause.
- The problem is not expanding manufacturing relative to agriculture it is in understanding the rates of return on investment within those sectors and the factors that prevent investment in high return activities.
- If history is any guide the investment rates will be such that agriculture’s share will contract as investment grows faster in the non-agricultural sector.
- It is precisely because the declining share of agriculture in SSA does not reflect a pattern of rapid income growth in other sectors that the structural change that has occurred has been so weakly linked to a pattern of employment generation that could have a major impact on poverty.