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UNEQUAL PROSPECTS: DISPARITIES IN THE QUANTITY AND QUALITY OF LABOUR SUPPLY IN SUB-SAHARAN AFRICA

1. Introduction

The issue of labour supply in Sub-Saharan Africa, like so many other economic and social issues in the region, is often discussed as if the whole sub-continent faced essentially similar, overwhelming and intractable problems. This pessimistic and over-generalised literature has been criticized elsewhere (Sender, 1999). By contrast, this paper stresses the importance of differences between and within Sub-Saharan African economies in the quantity and quality of labour supplies, and highlights the scope for policies to overcome constraints on employment prospects. The paper also points to the dangers of one-size-fits-all policy recommendations for the labour market, while at the same time identifying certain similarities in the characteristics of the most disadvantaged labour market entrants in many Sub-Saharan African economies. The aim is to begin to isolate the sub-set of policies that might be most relevant for these entrants, if donors and governments wish to re-allocate resources to improve prospects for the poorest Africans.[1]

Not all relevant policies can be discussed. For example, countries "severely affected" by HIV/AIDS will need to adopt a different range of policies towards labour supply from countries with lower prevalence rates, but the details of preventive and curative policy options are not explored. The paper describes the complex effects of violence and violent conflicts on many aspects of labour supply, but does not discuss post-war reconstruction policy initiatives, or interventions to reduce conflict. And policies that influence the demand for labour will have dramatic dynamic effects on the quantity and quality of labour supplied, but are largely ignored in this paper. Historically, when demand for labour has been strong in Sub-Saharan Africa labour inputs have responded in a number of ways. Participation rates have increased; and labour migration has risen in response to demand for imported labour. It is also well-known that rising demand for labour generates improvements in the quality of the labour force, through learning-by-doing processes and static and dynamic returns to scale. This paper is not concerned with the detailed analysis of appropriate macroeconomic strategies to achieve the level of demand required for rapid growth. The paper does, however, examine some of the barriers that workers in different countries currently face in responding to changing demand conditions in the labour market. These include transport and other barriers to labour mobility (Section 5); the pre-entry structured disadvantage experienced by women and certain other categories of worker (Section 2); the inadequacy of information, communication and money transmission facilities available to workers (Section 5); and government policies that are, to different degrees in different economies, limiting some workers' access to the basic education, primary health care and the negotiating skills that are required for advantageous participation in labour markets (Sections 2-4).

The paper also details the inadequacy of existing data and research on the poorest labour market entrants, particularly in a context of uneven and unreliably recorded

[1] The sample of countries analysed in most of the tables in this paper account for about 87 percent of the total estimated population of Sub-Saharan Africa.

HIV/AIDS prevalence. In addition to identifying some priorities for future research and the design of more relevant surveys, the paper concludes, on the basis of available evidence on the characteristics of these entrants, that too much emphasis has been placed on the issue of *unemployment* and on the existing and potential role of *self-employment* in the survival strategies of the poorest people. A new focus on the large number of poor women and men who participate in the labour market as workers for wages is required. It is necessary to identify those sectors that, in the short- to medium term, are likely to provide them with the forms of wage employment that are crucial for their survival. Trends in the real wages of these unrecorded workers should be monitored to assess progress in poverty reduction. The paper also highlights some other important data and research gaps. It is argued that more resources need to be devoted to understanding and recording the scale and patterns of labour force mobility within and between countries and from Africa to the rest of the world and that, similarly, more resources should be committed to monitoring the scale, determinants and consequences of violence, especially violence against girls and women.

There are several important barriers impeding the entry of the poor into forms of wage employment upon which they are most dependent. Some of these barriers can be lowered by appropriate investments in transport, communications and money transmission facilities. Others, including gender discrimination and the political and institutional factors reducing the bargaining power of both male and female wage workers, will only be overcome by less familiar policy initiatives, including legislation and investment to protect the workplace rights of "illegal" migrants and expenditures to improve workers' organisational capacity. Less controversially, the paper argues for targeted interventions that focus on increasing both the supply of and effective demand for rural schooling.

The paper is organised as follows: Section 2 focuses on the *quantity* of labour supplies. It begins by highlighting data inadequacies; it then proceeds to a discussion of the basic demographic trends that have influenced and will continue to influence the quantity (and quality) of the labour supply in different Sub-Saharan African countries, highlighting disparities between countries. Section 2 then discusses general patterns and inter-country variations in the labour supplies of prime age adults, children (including orphans), and youth. It examines these supplies in the context of the impact of HIV/AIDS, emphasising the difficulties involved in the projections of the labour market impact of the epidemic.

Sections3 and 4 analyse the *quality* of labour supplies.[2] Section 3 provides evidence on *inter*- and *intra*-country inequalities in the distribution of education, health and other services, in order to emphasise the fact that the labour supply from some regions and some households will have very different capacities to work productively. This section makes the case for policies that prioritise the bottom quintile of each country's

[2] This paper discusses labour productivity, health and education but does not use the concept of "human capital", which is theoretically problematic and is typically used ahistorically (Fine, 1998: Ch.3). Nor does the paper cover the literature based on cross-country regressions purporting to account for the contribution of improvements in "human capital" to the growth rate or to the rate of poverty reduction or the similar literature estimating average social rates of return to investments in education (for critiques of which see Bennell, 1996; and Freeman and Lindauer, 1999; on the inadequacy of time-series data on income distribution and age-specific education stocks in developing countries and in Sub-Saharan Africa in particular, see OECD New Database Paper, 2002).

rural population, which can be identified using robust and readily available asset or welfare indicators. However, it is also argued that designing appropriate, country-specific policies will require improved survey data and methods, an argument that is taken further in Section 6.

Section 4 identifies the potential for policy reform to improve the future quality of African labour supplies. The main influences on labour quality are the capacities to educate and to improve the health and skills of the next generation of workers. A robust analysis of these capacities, e.g., in schooling, is impeded by the paucity of country-specific data. Obviously, HIV/AIDS affects the quality of future labour supplies, but this too is not immune to policy. This Section emphasises the need to shift expenditures and incentives in order to encourage tertiary education enrolment and more effective recruitment of teachers to work in poor rural areas. Other policy interventions may also help to improve the poorest children's access to education, including payments to mothers conditional on their children's school attendance, free school meals for poor children and orphans, abolishing requirements for uniforms, and eradicating user fees. Similarly, Section 4 highlights the case for redirecting donor and government spending to achieve a higher density of health workers, as well as reorienting health delivery systems so that they focus less on curative facilities in relatively well off areas and more on rural, preventative facilities staffed by community nurses and other auxiliary health workers (who are also less likely to emigrate than more professionally trained health workers). Section 4 also discusses technical, vocational education, training and skills programmes. It concludes, first, that there is no evidence that these have been an effective mechanism for enhancing basic labour market skills and, second, that their objectives may more effectively and progressively be met by investing in basic literacy and numeracy and by enhancing all workers' capacities to negotiate with employers and to press for improved in-service training.

Section 5 focuses on labour mobility, arguing that many forms of mobility are important to poverty reduction and that constraints on mobility restrict the growth of labour productivity and poverty eradication efforts. It traces the main patterns of mobility in Sub-Saharan Africa, emphasising the vast scale and unevenness of mobility, the variety of factors affecting mobility and the inadequacy of the data. The roles of violence and direct and indirect forms of coercion in propelling population movements and creating labour supplies are stressed. The section then examines the available data on flows of migrants from Africa to the rest of the world and to other African countries, before focusing on international flows of highly skilled labour, the remittances of these skilled workers and other implications of these flows. A larger group of Sub-Saharan cross-border migrants are then examined, namely: refugees, forced migrants and displaced people. The Section continues with a brief discussion of the evidence on trafficking, followed by a more detailed analysis of the relationship between violence and labour supply. The policy implications, apart from the urgent need to invest in transport and communications infrastructure, are discussed in the final part of this Section. They include the need to recognise and record more accurately migrant African labourers as a foundation for interventions to facilitate their mobility and to protect them from abusive relationships.

Section 6 contains more detailed discussion of some of the policy implications of the earlier analysis. It starts by focusing on the importance of efforts to improve the data

that should underpin all policy interventions, paying particular attention to the Living Standards Measurement Surveys funded by the World Bank. The emphasis throughout this paper is on the conditions affecting labour supply among those in the poorest quintile of the population. This Section argues that encouraging growth in sectors that are intensive in the use of unskilled (female) labour will determine whether or not many of the poorest labour market entrants can survive. However, it is also important to increase the organisational and bargaining capacity of workers in these and other sectors, because there is no automatic mechanism smoothly linking employment expansion to poverty reduction. Further, concentrating on those particular sectors (and geographical areas) will make it easier, in the context of scarce resources and fiscal constraints, to make some progress with the other policies recommended throughout this paper, including the construction and maintenance of health facilities and the recruitment and motivation of primary school teachers.

2. Cross-Country Comparative Data on Labour Supply

2.1 Introduction: Data Inadequacies

Population Censuses and Labour Force Surveys are commonly used as primary sources of information on labour supply. These sources are used throughout this Section. However, very few countries in Sub-Saharan Africa have carried out Labour Force Surveys (LFS) and Censuses are often outdated (Tables A1 and A11). Yet, many outdated Censuses have been used as sampling frames for Living Standards Measurement (Household Budget) Surveys (LSMS) and for Core Welfare Indicators Questionnaire Surveys (CWIQS), which are increasingly becoming the main source of information used for labour market policy making. In fact, more than 45 LSMS and 18 CWIQS have been completed or begun since the mid-1980s[3], whereas only 10 LFS are included in the survey lists published by the World Bank. In 1994, a WB study on labour markets and structural adjustment only included three Sub-Saharan African country case studies (Kenya, Ghana and Cote d'Ivoire), of which just one was based on a labour force survey (Kenya).

Nevertheless, Labour Force Surveys and Population Censuses remain the primary sources for the ILO database (LABORSTA http://laborsta.ilo.org), providing the data for measures of the economically active population, employment-to-population ratios and the growth of the labour force, by gender and age groups (Behrman and Rosenzweig, 1994: 161). The response rates for a number of important indicators in Sub-Saharan Africa are low: zero percent for employment-to-population ratios, 14 percent for unemployment rates and 2 percent for youth unemployment rates (Schaible and Mahadevan-Vijaya, 2002: 2). The gaps in the data, both for individual countries and periods of time, have two implications. First, many countries in Sub-Saharan Africa have *no* reliable data on labour supply and we know practically nothing about labour demand and labour market dynamics in these countries. Second, the data shown for the countries covered are often based on estimates and projections that rely on brave assumptions concerning population dynamics (natural rates of

[3] There are also up to 66 income and expenditure surveys recorded in the African Monitoring Database, but many of these surveys do not include information on employment.

growth, age composition and migration), as well as on assumptions about the distribution of the labour force by sector, occupation and status.

It is, therefore, hardly surprising that different agencies publish very different estimates for key labour market statistics. For example, African Development Indicators 2003 shows interpolated data on the labour force (economically active population) for a complete time series. The ILO database presents data from the primary sources, so not all years are included. In Ethiopia, it is striking to note that the World Bank records a labour force of nearly 17 million people in 1980, while according to the ILO database there are only 14 million economically active people. In a number of random checks for the sample of countries covered in this paper similar inconsistencies appear between these two data sources, which is surprising because the ILO is cited as the source for the World Bank series.

This Section provides a cross-country comparative analysis of the underlying demographic determinants of the total labour supply. Trends in the quantity of labour supplied by adults, children and youth are discussed in the subsequent sub-Sections. It is regrettable that more reliable data were not available, particularly to analyse the impact of HIV/AIDS on labour supplies. The starting point for any analysis of the impact of HIV/AIDS should be recent data on prevalence and mortality rates. Unfortunately, there is remarkably little good quality information available that would enable the levels and thus trends in national HIV prevalence rates to be accurately monitored (Bennell, 2003a). No country in Sub-Saharan Africa collects reliable "vital registration" data on deaths.[4] As a consequence, all figures describing the number of AIDS-related deaths in Africa are estimates of some kind (Ngom and Clark, 2003: 3). UNAIDS warn that their published estimates of HIV prevalence should be viewed as having an accuracy of +/- 25 percent (Zaba et al, 2003: 13).

There is little population-based survey data providing information on age and gender-specific HIV infection rates by location and socio-economic background. Instead, HIV prevalence estimates rely on the testing of those pregnant women who attend public sector antenatal clinics (ANCs). This is not an accurate method for measuring national, age-specific, or male prevalence levels. Inaccuracies arise because:

- Sentinel surveillance in ANC clinics has an inherent selection bias against women using modern contraceptives. Women who have adopted consistent condom use are less likely to become pregnant and to attend the clinics.
- In the countries with more mature epidemics, there is some concern that ANC data may underestimate HIV prevalence, because of falling fertility among HIV positive women (Whiteside et al, 2003:10-11). If fertility is considerably lower among HIV-positive women, available estimates of HIV prevalence may be downwardly biased (United Nations, 2004c: 26).
- Rural data are biased towards larger villages and settlements close to towns and roads. Rural samples tend to be small and have often been biased towards more seriously affected rural areas (Dyson, 2003: 428). Very poor rural women and those living in more remote rural areas are less likely to attend antenatal clinics, as suggested by the data in Table 10.

[4] Even in South Africa the registration of adult deaths remains incomplete, there are long delays in publishing official statistics, and there is unreliable certification of AIDS (Bradshaw et al, 2004).

It is hoped that the inclusion of HIV-testing of adults in the more recent DHS nationwide population-based samples in Malawi, Kenya and Uganda will provide more accurate estimates of age- and location-specific prevalence. However, both DHS and ANC data have to be combined with population census data to estimate national prevalence rates. If the last census is judged to have been unreliable, DHS may be forced to use another sampling frame, such as the electoral lists in Mozambique; but these electoral lists may well not be accurate.[5]

Moreover, as noted above, the published population census data for many Sub-Saharan African countries are often five or more years old (US Census Bureau, 2004), e.g. in Swaziland, Lesotho, Malawi, Mozambique, Cote D'Ivoire and Ethiopia. Large population shifts may have taken place in the intervening years (see below, Section 5), as a result of war, famine and forced migration, and changes in fundamental demographic variables such as fertility rates may have been faster than expected. There are, in addition, several other problems with the African population census data used to derive not only estimates of HIV prevalence, but also all labour force estimates. Undercounting may be caused by logistical difficulties, accessibility and risk; misreporting is difficult to correct in the absence of alternative cross-checking lists;[6] and censorship by governments may affect the published estimates of the regional breakdown of the population. In sum, the combination of unreliable prevalence data with unreliable population census data is bound to exacerbate the problem of interpreting the results.

Projections of the impact of HIV on the labour supply need strong assumptions about the distribution of the time of progression from HIV infections to AIDS and from AIDS to death. Such projections would also have to build in assumptions about how this progression affects capacity for labour market participation. Very small changes in the assumptions made regarding progression time have important effects on projected mortality, but it is acknowledged that there is a great deal of uncertainty about the reliability of the particular assumptions made by UNAIDS and used in the Population Division's 2004 projections of the impact of HIV (United Nations, 2004c: 26). Similarly, for its projections of labour supply, the ILO has made assumptions about the duration of the periods when individuals are first partially and eventually fully unable to work without treatment and before death. Thus, they define a stage during which a person living with HIV/AIDS is bedridden for up to 50 percent of the time and can only work for 50 percent of the time (Stage3); and another, when a person is bedridden for more than 50 percent of the time and cannot work at all. However, the ILO admits that its assumptions are based on "a very small" body of literature on the progression of HIV/AIDS from the onset of symptoms to death (ILO, 2004a: 67). The first empirical evidence available on the impact of HIV/AIDS on labour productivity, also published in 2004, suggests that pre-AIDS morbidity affects

[5] In the recent DHS for Nigeria the sampling frame was the list of enumeration areas developed for the dated and unreliable 1991 Population Census (DHS, 2004, 211). Other evidence suggests that the quality of data collected in the Nigerian DHS may be low (Case et al, 2002, 6).

[6] Even in countries with sophisticated census facilities, such as South Africa and the USA, “illegal” backyard shack residents or migrant workers are often undercounted (Wittenberg, 2004; Lobo, 2002). In Sub-Saharan Africa, interviewers and respondents can have differing interpretations of the concept of “a person who is usually resident”, because of difficulties of defining this concept in contexts where the population is extremely mobile and the complex patterns of household formation do not conform to the stereotype of stable, nuclear families (Chamie, 1994).

the ability and productivity of infected workers over a substantially longer period of time than has previously been recognised (Fox et al, 2004:323).

Unfortunately, the problems in projecting the size and timing of the impact of HIV/AIDS on women, men and children in different Sub-Saharan African countries are much more complex than suggested in the previous paragraphs (Ngom and Clark, 2003; Zaba et al, 2003; Gregson et al, 2002). For example, these projections depend on weakly grounded assumptions about population-specific behavioural factors, such as current and future sexual networking preferences, as well as on assumptions about vertical transmission rates under different treatment regimes in the future. Projections also depend upon future trends in conflict and violence in Sub-Saharan Africa, since wars are known to spread infection (Section 5). But it is difficult to conceive a method of predicting the outbreak of wars. As Keynes noted when referring to the prospects of a European war, "About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know!" (Keynes, 1937, 241).

2.2 Basic Demographic Characteristics: Population Size, Growth Rates and Age Composition

Despite the data limitations noted above, there is little doubt that the basic demographic characteristics that will continue to influence the supply of labour, both the absolute supply and its quality, differ very substantially between the economies of Sub-Saharan Africa. This is true not only in the trivial sense that the current working age population is, for example, about 25 times larger in Ethiopia than in Swaziland, Lesotho or Mauritania; there are also significant differences in the recent and projected *growth rates* of the population and labour force between countries. For example, between 2000 and 2005, the estimated annual rate of growth of population in Uganda is 3.24 percent and in Mauritania, Ethiopia, Senegal and Ghana it is well over two percent, whereas in Lesotho it is barely positive (0.14 percent) and in five other countries in our sample it is only 1.6 percent or below (Table 1).

Table 1: Total Population and Population Growth Rates, 2000-2005

	Total Population 2005 (Thousands)	Annual Population Growth (%) Years: 2000-2005 (Medium Variant)
Cote d'Ivoire	17,165	1.62
Ethiopia	74,189	2.46
Ghana	21,833	2.17

Kenya	
	32,849
	1.45
Lesotho	
	1,797
	0.14
Malawi	
	12,572
	2.01
Mauritania	
	3,069
	2.98
Mozambique	
	19,495
	1.75
Senegal	
	10,587
	2.39
South Africa	
	45,323
	0.59
Swaziland	
	1,087
	0.80
Tanzania	
	38,365
	1.93
Uganda	
	27,623
	3.24
Zambia	
	11,043
	1.16
Sub-Saharan Africa	
	732,510
	2.28

Source: United Nations (2004b).

The current age structure and, therefore, the proportion of the population of working age (defined here as the population aged between 15 and 59 years) is also very different across African countries, as is the distribution of the population between rural and urban areas. For example, only 12 percent of Uganda's population was urban in 2003, compared to 62 percent of the population in Mauritania; differences

between African countries in recent and projected annual rates of change in the urban proportion of the population are equally stark, with projected rates for 2005-2010 of above 2.4 percent in Kenya, Malawi, Mozambique and Tanzania, compared to rates of about one percent or below in several other countries in the sample (Table 2).

Table 2: Urbanization in 2003 and Projected Rates of Urbanization, 2005-2010[a]

	Percentage of the Population Urban (2003)	Annual Rate of Change of Percentage Urban 2005-2010 (%)
Cote d'Ivoire	45	1.1
Ethiopia	16	1.9
Ghana	45	1.0
Kenya	40	2.4
Lesotho	18	1.2
Malawi	16	2.6
Mauritania	62	1.6
Mozambique	36	2.7
Senegal	50	1.3
South Africa	57	0.8
Swaziland	24	1.0
Tanzania	35	2.5
Uganda	12	1.1
Zambia	36	1.1
Africa (2005)	40	3.4

Source: United Nations (2004a).

[a] In this and many other tables of this paper numbers have been rounded from the original source.

While most economies in Sub-Saharan Africa contain a relatively large proportion of young people, reflected in a median age of only 17.5 years (compared to a median age of 26 years in Asia), there is a wide disparity in the median ages of the populations of different Sub-Saharan African economies. For example, the median age in Uganda in 2000 was estimated as 15.1 years, compared to 18.8 years in Ghana and Lesotho, and 22.6 years in South Africa. Thus, in several countries only a low percentage (50 percent or less) of the population is of working age. The ILO has projected the dependency ratio (defined as dependents per 100 non-dependent persons in 2005) for 35 African economies, including most of those covered in this paper (Table 3). Unsurprisingly, this ratio is much higher in Uganda (112) than, e.g., in Ghana (73) or South Africa (57). The projected percentage increase in the population of working age over the period 2000 to 2010 ranges from 35.6 percent in Uganda to 17.8 percent in Mozambique and to only 5.2 percent in Lesotho (UNCTAD, 2004: Table 19).

Table 3: Median Age, the Working Age Population as a Percentage of the Total Population, and Projected Dependency Ratios

	Working Age Population as % Total Population (2000)*	Median Age of the Total Population (2000)*	Projected Dependency Ratio: Dependents per 100 Nondependent Persons (2005)**
Cote d'Ivoire	52.3	18.1	78
Ethiopia	49.5	16.9	93
Ghana	53.9	18.8	73
Kenya	52.4	17.7	76
Lesotho	52.6	18.8	79
Malawi	49.2	17.1	101
Mauritania	51.4	18.2	…
Mozambique	50.9	17.8	88
Senegal	51.8	17.6	…
South Africa	60.1	22.6	57
Swaziland	50.9	17.4	87
Tanzania	…	16.8	88
Uganda	46.2	15.1	112
Zambia	51.4	16.7	99
Sub-Saharan Africa	50.9	17.5	87
Asia (5 Countries)		26.1	49**
Eastern Asia	64.9	30.8	
South-Central Asia	57.4	22.4	

Sources: *United Nations (2003); ** (ILO, 2004a: 74).

The HIV/AIDS pandemic will have a major impact on the age and sex composition and the rates of growth of the population and labour force of Sub-Saharan African economies. The scale, scope and timing of the impact on the quantity and quality of labour supplied are extremely difficult to estimate precisely, but will certainly be different in each country. This Section of this paper will present some evidence on the impact of HIV/AIDS on the *quantity* of labour supplied in different Sub-Saharan African countries, focussing initially on the supply of prime age adults, before turning to the supplies of child and youth labour. The following Section will focus on the productivity or *quality* of the anticipated supplies of labour in different countries in the first decades of the twenty first century.

2.3 The Impact of HIV/AIDS on the Prime Age Adult Labour Supply

In many of the high prevalence countries in Southern Africa, less than 40 percent of current survivors to age 15 will celebrate their sixtieth birthdays (Ngom and Clark, 2003: 2).[7] For both females and males of working age, higher national HIV prevalence rates increase the probability of dying between the ages of 20 and 60, but the impact on females in this age group generally occurs at *younger* ages and is more focused on a narrow age band (ibid: 7). Thus, throughout Sub-Saharan Africa young

[7] In Botswana, for example, it is predicted that by 2025 more than half of the potential population aged 35-59 will have been lost to AIDS (United Nations, 2004c: 21).

women (aged 15-24 years) are twice as likely as young men to be living with HIV/AIDS (UNICEF, http://www.unicef.org/lifeskills/index.html). Recent South African data indicate even greater gender disparities, with females in this age group being 3 times more likely to be infected than males (Bradshaw et al, 2004:140). About a quarter of the slightly older young adult females (aged between 20 and 24 years) are HIV positive in South Africa, compared to only 7.6 percent of males in the same age group (RHRU, 2004: 29). A smaller survey in Kenya found that over 27 percent of girls aged 15-19 were infected with HIV compared to 4.6 percent of boys in the same age group (Glynn et al, 2001).

In high prevalence countries such as South Africa, as well as in areas like Kisumu (Kenya), the death of large numbers of relatively young adult females has important short- and medium-term implications for the age composition of female labour supplies and for the care-giving obligations of older women, who will devote years of labour to washing, feeding and nursing the chronically ill (Steinberg et al, 2002:15). There are also important implications for the children of this large group of women, since they will receive relatively few years of maternal care. The implication is that the nutritional status and the quality of the future labour force will be adversely affected.[8] Children will be deprived "of those very things they need to become economically productive adults – their parents' loving care, knowledge and capacity to finance education" (Bell et al, 2003:92).

These inter-generational productivity effects will probably have more obvious and serious economic consequences than those suggested by the aggregative *quantitative* changes in labour supply projected by the ILO. The proportion of the total labour force that will have died as a result of HIV/AIDS by 2005 appears to be quite small in Sub-Saharan Africa as a whole (3.2 percent), according to ILO definitions of the labour force and ILO projections,[9] although this proportion is obviously much higher in some countries than others (Table 4).

[8] Household expenditures on child-related goods – in particular on healthy foods – are lower when a child's biological mother is absent (Case et al, 2002: 2).

[9] The ILO defines the "labour force" as the sum of all persons who are economically active—a formal definition encompassing all persons of working age who are in paid employment, gainful self-employment, or unemployed, but available for and seeking work. The labour force is quantified by summing the products of economic activity rates estimated by the ILO for each age and sex group and the population weights of the same age and sex groups (ILO, 2004a: 4).

Table 4: Estimated and Projected Labour Force Losses as a Result of HIV/AIDS

Countries in Alphabetical Order	Estimated number of persons 15-64 years in the labour force who are HIV positive in 2003	Projected Cumulative mortality losses to the total labour force as a result of HIV/AIDS, as an equivalent proportion of the total labour force, 2005
Côte d'Ivoire	399,400	5.2
Ethiopia	1,336,766	2.1
Ghana	292,297	1.5
Kenya	1,003,534	4.2
Lesotho	211,300	8.3
Malawi	737,700	6.9
Mozambique	1,128,500	2.4
South Africa	3,698,827	2.5
Swaziland	134,100	4.9
Uganda	454,242	8.4
Tanzania	1,401,300	3.3
Zambia	726,800	10.2
Total (Sub-Saharan Africa, 35 Countries, Weighted)	18,610,517	3.2
Total (Asia, 5 countries)	4,886,600	0.2

Source: ILO, 2004a.

There is disaggregated evidence to suggest that the risk of HIV-related death is particularly high for those young female adults who have few years of education (UNICEF, 2004b). Thus, in South Africa, among those adults aged 20-24, HIV positive females had completed significantly fewer years of education than HIV negative females. Condom use was much lower among rural (less educated) than urban (more educated) youth in South Africa. Higher levels of education have often been associated with condom use elsewhere in Sub-Saharan Africa (RHRU, 2004: 33; Luke, 2002:9-10).[10] There is also strong evidence that the children of poorly educated mothers are at relatively high risk of malnutrition and illiteracy (Smith and Haddad, 1999). The policy implication is that resources need to be focused on young females who are at risk of failing to attend school or of early school dropout, who are concentrated in the rural areas of Sub-Saharan Africa. Unfortunately, health and education expenditures are not currently concentrated on these rural young women (Section 3); the consequences for the quality of the labour that will be supplied by their children are extremely serious.

2.4 The Impact of HIV/AIDS on Child Labour Supply

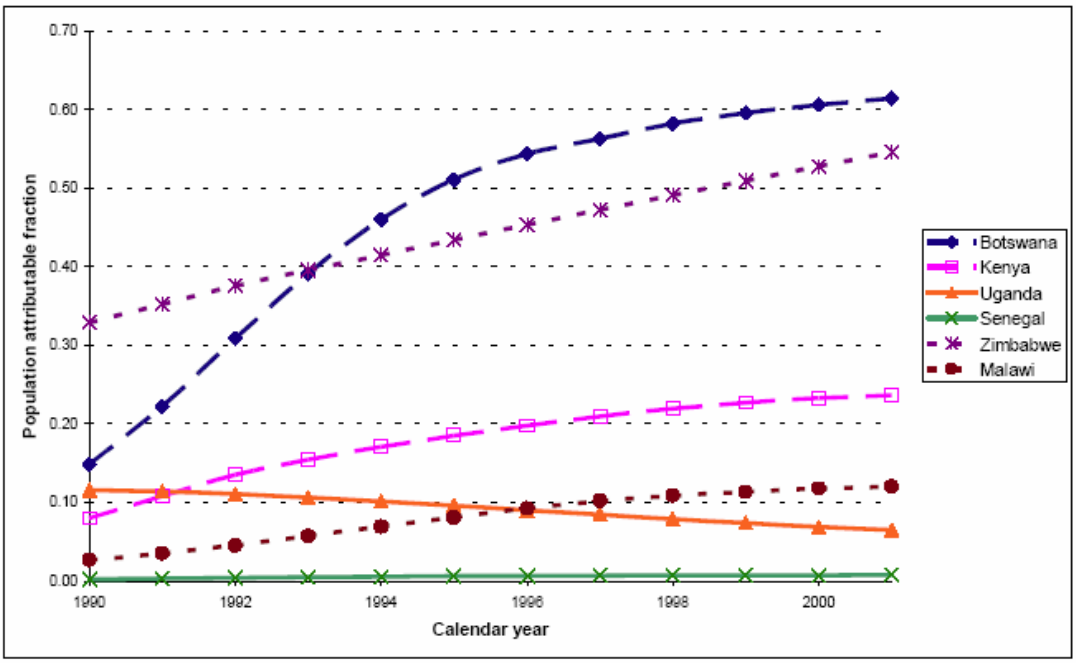
Estimating the effect of HIV/AIDS on potential child labour supply depends, in part, on being able to assess the trend in child mortality among *uninfected* children. The United Nations Population Division projections indicate that child mortality among uninfected children is declining at very different rates in different Sub-Saharan

[10] Despite the efficacy and low cost of condoms there has been remarkably little effort to increase the supply of condoms to poor rural Africans. The number of condoms available per man aged 15-59 per year averages only 4.6 in Sub-Saharan Africa. Donor funding of condom supply has not increased in the period since 1995 (Shelton and Johnston, 2004)

African countries and that these countries also exhibit marked disparities in initial levels of child mortality. These differing "background" trends may exacerbate or mask the deterioration in mortality that is attributable to HIV. For example, a country with a high "background" level of child mortality, such as Malawi (Table 5), may continue to experience an overall *decline* in child mortality in the face of HIV, if it manages to sustain the rapid rate of decline in non-HIV related child mortality that it achieved in recent years.

In contrast, in countries with relatively low initial levels of child mortality (and high HIV prevalence) such as Botswana, child mortality has risen very sharply and HIV attributable mortality is now over 50 percent. In Uganda, declines in "background" mortality coincide with an estimated decrease in HIV prevalence, with the result that the fraction of child mortality attributable to HIV is declining. These contrasts in the proportion of overall child mortality that is attributable to HIV in different countries are illustrated in Figure 1. It may be concluded that trends in child mortality will differ between countries, not only because of the marked differences in the rates at which HIV prevalence increases, but also because of differences in non-HIV related child mortality. It is clear that expenditures to reduce non-HIV mortality could continue to play a major role in overall child mortality reduction in several African countries, quite apart from expenditures on the available cost-effective treatments to reduce rates of mother to child HIV-transmission (Wilkinson et al, 2000).

Figure 1: HIV Population Attributable Fraction of Child Mortality, 1990 to 2001



Source: Zaba et al, 2003: 10.

In addition to the epidemiological and demographic factors differentially affecting future supplies of child labour, there is patchy evidence from studies sponsored by the ILO that some countries are much more likely to provide child entrants to the labour market than others. In other words, the proportion of children who work, as a

percentage of the age cohort, appears to vary a great deal between countries (Table 5, Column 3). This variation suggests that the circumstances that produce child labour are not immutable across the African region and that there is scope for government policy to reduce child labour.

Table 5: Working children aged 5 to 17, in thousands (percent of cohort shown in brackets)

Country	Year of survey	Total economically active (including "light" work)	Child labourers (economic activities only)	Total active (economic and non-economic)
Ethiopia	2001	9,463 (52%)	n.a.	15,468 (85%)
Ghana	2001	2,475 (39%)	1,273 (20%)	5,661 (89%)
Kenya	1998/9	1, 894 (17%)	1, 305 (12%)	n.a.
Namibia	1999	72 (16%)	n.a.	n.a.
S. Africa	1999	1,979 (15%)	1,136 (8%)	6,040 (45%)
Tanzania	2000/1	4,736 (40%)	1,168 (10%)	n.a.
Uganda	2000/1	2,677 (34%)	n.a.	n.a.
Zambia	1999	595 (16%)	n.a.	n.a.
Zimbabwe	1999	1,226 (26%)	356 (8%)	n.a.

Sources: Federal Democratic Republic of Ethiopia 2001, Ghana Statistical Service 2003, Republic of Kenya 2001, Namibia Ministry of Labour 2000, Statistics South Africa 2001, Tanzania Ministry of Labour, Youth Development & Sports nd, Ugandan Bureau of Statistics nd, Republic of Zambia n.d., Zimbabwe nd

However, not all of the work performed by children falls under the definition of "Child Labour" used by the ILO and incorporated in Table 5 (Column 4). Their approach *excludes* children engaged in work considered to be non-economic in nature, for example, domestic work within the household. However, such "non-economic" activities may themselves be substantial enough to prevent a child from attending school and so the use of the ILO definition is likely to bias downwards estimates of relevant child labour with a particular impact on the estimates of girls who are involved in a detrimental level of domestic work (Basu & Tzannatos, 2003:156). This concern applies more widely, with many other labour force or child labour surveys failing to consider the full range of types of work done by children, including not only domestic work, but also seasonal piece work as part of mother-child agricultural labour teams.

The inclusion of household work can lead to significant differences in the data on the overall number of working children, and on the gender burden of work. For example, the Ethiopia 2001 Child Labour Report (Federal Democratic Republic of Ethiopia 2001) finds that 85 percent of the 5-17 age group is involved in some kind of work, if "non-economic" activities are included (Table 5, Column 5). This falls to 52 percent if only directly productive activities are included. Considering only directly productive activities, 62 percent of boys are active and 42 percent of girls. However, the situation is reversed when housekeeping activities are taken into account, as these are dominated by girls (with an activity rate of 44% for girls compared to 23% for boys).

Also excluded from the ILO data on child labour are those children who are economically active between the ages of 12 and 14, when they are considered to be

engaged in light work (defined as less than 14 hours a week). Table 5 provides separate estimates of the number of all economically active children, including those engaged in light work (Column 3), as well the ILO's estimates of child labour (Column 4). It also provides the few survey estimates of the total number of active children that include children involved in "non-economic" activities (Column 5).[11]

As well as substantial differences between African countries, the ILO-sponsored studies also show substantial differences in the supply of child labour *within* countries. These are complex; they cannot be simplified into a rural-urban dichotomy, or summarised by reference to the characteristics of children living in poorer as opposed to wealthier households.[12] In fact, studies in different countries do not agree on the degree to which household poverty can explain the pattern of child labour. Early entry into the labour market and incomplete basic education depend on changing sets of factors that are likely to vary from household to household and to be affected by changes in demand and supply conditions, as well as by the pattern of state expenditure on schooling and rural infrastructure.[13] For example, survey data from the Kagera region of Tanzania indicate that households increased their use of child labour in response to sharp declines in the total value of crops farmed due to pests, diseases and calamities such as fires (Beegle et al, 2003). Similarly, a study based on LSMS data from Cote d'Ivoire suggests that economic recession led to a contra-cyclical general rise in child economic activity (Grootaert, 1998:13). Grootaert identified five key factors which affected a household's decision to supply child labour: the age and gender of the child, the education and employment status of parents, the availability of within household employment opportunities, the household's poverty status and its geographic location. Not only was labour market participation likely to increase with age of the child, but there were also clear trends by gender, with girls less likely to attend school and more likely to engage in household tasks. In rural areas, having a female household-head meant that a child was more likely to work. In addition, parents with no or low education were more likely to have children engaged in work. Grootaert describes the presence of household enterprises as a 'double-edged sword' (ibid, 1998:65). On the one hand, increased income will decrease the likelihood that a child will work, although he noted that ownership of a household enterprise was a positive correlate of poverty in

[11] It should be noted that the surveys that were the sources for the data in Table 5 did not always use the same approaches and definitions. They are not strictly comparable and cannot be an adequate basis for published estimates of the percentage of the cohort aged 5 to 14 years that is working in the Sub-Saharan African region as a whole (Table A13).

[12] Many of the studies provide a rural-urban breakdown of the data and these show that the prevalence of child labour is often higher in rural areas. For example, the Zambian survey found that only 5 percent of children were likely to be economically active in urban areas, compared to 23 percent in rural areas (Republic of Zambia n.d.:25). Participation rates also varied widely by province, with a participation rate of 25 percent in Southern province and one of only 4 percent in Lusaka province. The South African study produced more detailed disaggregated data, reporting the prevalence of children working in either productive or domestic tasks in a formal urban area (23 percent), informal urban area (23 percent), commercial farming area (48 percent) and other rural area (64 percent) (Statistics South Africa 2001:35). Other studies have shown marked differences between child workers within the same country in term of the sectors in which they work and their age- and gender-specific participation rates.

[13] The influence of state expenditure on schooling on the age-specific participation rates of girls in the casual agricultural wage labour markets in India and, therefore, on real wages and poverty in rural India, has been explored by Sen and Ghosh (1993).

Cote d'Ivoire. On the other hand, the presence of a household enterprise meant that it was more likely that a child would work.

Similarly, an econometric analysis of Ghanaian data (Canagarajah and Coulombe, 1997) suggests that poverty is *not* the main factor behind child labour, with a statistically weak relationship (see also Nielsen 1998, who finds no positive relationship between poverty and child labour in Zambia). Instead, family characteristics had a strong role to play in the decision over school or work, with households who earned a larger share of their income from family enterprises, farming or otherwise, having a higher child labour participation rate (ibid: 27).[14]

Another study of Ghanaian data contradicts some of these conclusions and does find a positive relationship between poverty and child labour, as well as evidence of a gender gap in child labour linked to poverty, with girls as a group as well as across urban, rural and poverty sub-samples being consistently more likely to engage in harmful child labour than boys (Blunch and Verner, 2000: 3). Similarly, an econometric analysis of the ILO data on economic activity within SSA countries finds a strong and significant statistical relationship between the incidence of poverty and the prevalence of child economic activity (Admassie, 2002:267). Whilst the impact was small, poverty was one of the most significant variables arising from his study.[15]

The supply of child migrant labour from Benin, where 8 percent of all rural children aged between 6 and 16 years have left their parental households to work (half of them leaving for other countries, with boys heading for plantations in the Cote D'Ivoire and the girls mainly looking for domestic service in Gabon), cannot be explained by the relative poverty of the migrant-sending households. In fact, relatively wealthy rural households may be *more* likely to be able to finance such migrations (Andvig et al, 2001: 13). Elsewhere, when long-distance migration is not involved, there is evidence that rural child domestic servants do come from extremely poor households, or are orphans (Sender et al, 2004). Since the market for domestic servants is probably the most extensive market for child labour in Sub-Saharan Africa, it is remarkable how little research has been conducted into the poverty of the households supplying the children concerned, into remittance behaviour, or into these children's real wages and working conditions. The economic history of the developed economies suggests that a very high and increasing proportion of young girls will, over the next few decades of economic development in Africa, enter the labour market as domestic servants (Roberts, 1995; Vickery, 1998; Bras, 2003).

There has also been little research that focuses on the specific issue of the impact of HIV/AIDS on the labour market participation of children. The ILO has not attempted

[14]This result is supported by Bhalotra & Heady's (2003) analysis of an early Ghanaian living standard survey. These authors found that girls in land rich households were more likely to work than girls in land poor households.

[15] Admassie also suggests that differing agricultural technologies within SSA could provide another explanatory variable for divergent patterns of child labour prevalence. His conclusion is that promoting improved agricultural technologies that are less unskilled-labour intensive would have the effect of reducing the demand for child labour as well as playing an important role in reducing poverty. However, historical studies of the impact of technological change on child labour in the developed countries suggest that early technological change was often facilitated by the use of child labour, and that later changes that appeared to discourage child labour were often bolstered by legislation (Humphries, 2001:181-2).

to include child labour in its estimates of the impact of HIV on the projected size of the labour force. Its recent projections of the HIV-affected and non-affected labour force are based on the numbers of people defined as economically active between the ages of 15 and 64 years, ignoring the labour force aged between 5 and 14 years (ILO, 2004a: 66). The few available micro-studies of the effects of HIV/AIDS on rural households have typically been confined to geographic areas known to have high HIV prevalence. Their findings cannot, therefore, be extrapolated to a national scale. Besides, they suggest that rural responses to the death of a prime age adult are heterogeneous, with affected households replacing agricultural labour through the arrival of new *adult* members, through labour hiring and by changing their cropping patterns and varying the input mix, rather than by resorting to child labour (Mather et al, 2004).

Micro data from 24 districts in rural Kenya suggest that households adjust, after experiencing the death of a working age female (who is not the head of the household or the female spouse of the head of household), by attracting "boys" into the household. The labour of these newly resident young male relatives appears to substitute for the tasks previously performed by the deceased woman, although no information is provided on whether or not these boys should be considered as new entrants into the child labour force (Yamano and Jayne, 2004:102).[16] A larger scale study in Tanzania found that, "Analysis of farm and chore hours across demographic groups generally found small and insignificant changes in labor supply of individuals in households experiencing a prime-age adult death. The lack of an increase in hours … is notable for children in particular for whom deaths are presumed to result in higher farm hours assuming there will be an acute shortage of farm labor" (Beegle, 2003:24-5).[17]

Thus, there is no reliable direct evidence suggesting that AIDS orphans are more likely than other orphans or children to enter the market for child labour. Whether or not children and orphans enter labour markets appears to be context specific, with some orphans and AIDS orphans having access to household or extended family resources that enable them to avoid premature entry, even if they experience serious emotional distress and other, long-term adverse consequences. Nevertheless, the HIV/AIDS epidemic is clearly having a massive impact on the total number of orphans in Sub-Saharan Africa. At the end of 2001, the proportion of orphans in SSA who were AIDS orphans has been estimated at 32 percent. By 2010, it has been estimated that the proportion will be 48 percent. Those countries with the highest prevalence of HIV already have the highest prevalence of orphans, although countries

[16] Another Kenyan micro study refers to anecdotal evidence that those workers on tea estates who were suffering as a result of HIV/AIDS were more likely than a control group of workers to "bring helpers" with them to pluck tea (Fox et al, 2004: 323). It is likely that some of these family "helpers" were children.

[17] Another Tanzanian study, comparing the 2000/01 Integrated Labor Force Survey with results from the 1990/91 Labor Force Survey, comes to different, though tentative, conclusions. The authors found a dramatic *increase* in labour force participation rates for children aged 10-14, and a much milder increase for those aged 15-19, while education transition matrices drawn from enrolment data suggest an increased tendency during the 1990s to exit primary school. However, these two labour force surveys are not comparable. Therefore the recorded increase in child labour participation in the period between the surveys may not, in fact, reflect the spread of the epidemic or labour market realities (Arndt and Wobst, 2002: 8-9).

that have experienced violent conflict, such as Mozambique and Rwanda, also have a large proportion of children who are orphaned (Grassley and Timaeus, 2003, 4-6).

The percentage of the relevant age group (0-14 years) that is orphaned varies dramatically between countries, from less than 6 percent (Ghana) to 12 percent or more in Uganda and Mozambique (ibid: 10). The ILO estimates the absolute number of orphans in Sub-Saharan Africa as a result of HIV/AIDS in 2003 (12 million),[18] but the inter-country range is striking, from only 65,000 children in Swaziland to about one million children in Uganda, Tanzania and South Africa (Table 6).

Table 6: HIV Prevalence and Numbers of Orphans, 2003

Countries in Alphabetical Order	Estimated HIV Prevalence in Persons 15-49 Years (%) 2003	Estimated Total Number of Orphans (0-17 Years) as result of HIV/AIDS 2003
Côte d'Ivoire	7.0	310,000
Ethiopia	4.4	720,000
Ghana	3.1	170,000
Kenya	6.7	650,000
Lesotho	28.9	100,000
Malawi	14.2	500,000
Mozambique	12.2	470,000
South Africa	21.5	1,100,000
Swaziland	38.8	65,000
Uganda	4.1	940,000
United Republic of Tanzania	8.8	980,000
Zambia	16.5	630.000
Total (Sub-Saharan Africa, 35 Countries, Weighted)	7.7	12,016,300
Total (Asia, 5 countries)	0.4	2,053,000

Source: ILO, 2004: 88-9

In most Sub-Saharan African countries, a high proportion (about half) of all orphans is currently in the age-group 10-14 years. Therefore, large numbers of orphaned children may confidently be expected to enter labour markets in the next few years. The quality of these new entrants, the degree to which their orphan status will directly

[18] This estimate is obviously much smaller than the available estimates for the total number of orphans. These estimates vary from 35 million to 47 million depending on the age range of the children included (Grassley and Timaeus, 2003). The causal processes determining the total number of orphans – conflict, natural disaster, maternal death, malaria etc. and AIDS, are complex and interact with one another.

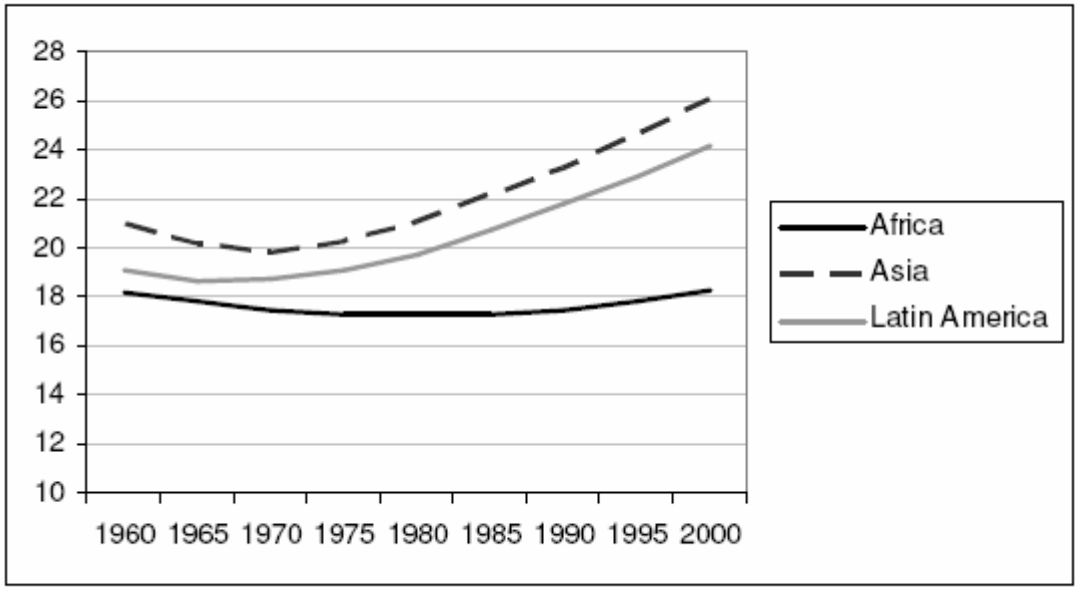
have compromised their health, nutrition and levels of education, is a key policy issue. This is discussed below (Section 3.2), after examining the more general question of the scale of projected increases in the supply of youth to the labour market.

2.5 The Impact of HIV/AIDS on the Labour Supply of Youth

The relatively high proportion of young people in the working age population of all Sub-Saharan African economies compared to other developing regions has already been noted (Table 3), as have the important differences in age-composition across African economies. Fertility rates in Sub-Saharan Africa are, in general, declining at a slower rate than in other developing regions and the share of youth, (i.e. 15-24 year olds), in the total population of working age in the sub-continent is projected to remain more or less constant at about 36 percent between 2000 and 2015. This is a very much higher share for youth than, for example, in the South-Eastern Asian economies, where the youth share in the total working age population is projected to decline significantly by 2015 (Table A2).

Despite the appalling effects of HIV/AIDS mortality on young people and especially young females, the increase in the size of the youth labour force in Sub-Saharan Africa up to 2015 (28.2 percent) is still projected to be about as great as the increase in the adult (25+ years) labour force. This is in marked contrast to other developing regions, where the youth labour force will increase by less than 3 percent, compared to an increase of over 26 percent in the adult labour force (Table A2). Figure 2 provides a graphic illustration of the historic growth in the difference between the share of young people in the population of Africa and the share of young people in the populations of other developing regions.

Figure 2: Median Age of the population in Africa, Asia and Latin America



Source: Berthélemy, 2004: 25

The slow rate of increase in the labour supply of youth in some non-African developing regions is not only attributable to more rapidly declining fertility trends, but also to the fact that more youths are staying in education for longer (ILO, 2004b: 6). Therefore, in the Sub-Saharan African context, there is scope for policies to reduce the very rapid rate of growth in the number of new young entrants into the labour market. In the short- to medium-term, a reduction in primary school dropout rates and an increase in the transition rate from earlier to later levels of the education system are the recommended supply reducing policies. These policies are much more likely to be efficient in improving the quality of youth labour supplies than attempts to "keep young people off the streets" by offering training of various kinds for those who have already left school (Godfrey, 2003: 18). (Some of the inefficiencies of expenditures on youth training, as well as the pro-rich bias of other policies aimed at improving the quality of young labour market entrants, will be discussed in Section 4.4 below).

2.6 Summary and Conclusions

The starting point for analysing labour supply in Sub-Saharan Africa is that there are gaping holes in the available data and that published estimates of different international agencies sometimes conflict. A large number of countries in the region have no reliable information on labour supply. Moreover, the data on countries that are covered by Labour Force Surveys and Population Censuses are often based on estimates and projections relying on guesstimates about population dynamics and the distribution of the labour force by sector, occupation and status. In addition, there is remarkably little good quality information that would make possible an accurate monitoring of levels and trends in national HIV prevalence rates. The intersection of inadequate HIV data collection and widespread shortcomings in broader demographic data mean that policy makers are limited in their ability to understand accurately and effectively respond to labour supply issues in the region.

Nonetheless, Section 2 has pieced together a coherent analytical story about the quantity dimension of labour supply in Sub-Saharan Africa. The overriding theme of this analysis is the striking inequalities in labour supply characteristics, both between countries and, in some ways even more importantly, within countries. This section concentrates particularly on inter-country variations, while later sections focus more sharply on intra-country inequalities.

The size of populations varies enormously and there are significant differences in the projected growth rates of these populations. The current age structure of the population, and hence the proportion of the population of working age, also varies significantly from country to country. Thus the median age of Ugandans, in 2000, was estimated at 15.1 years, compared to 18.8 years in Ghana and 22.6 years in South Africa. While only 12 percent of Uganda's population was urban in 2003, 62 percent of Mauritanians lived in urban areas; and the urban population is projected to grow more rapidly in some countries (Kenya, Malawi, Mozambique, and Tanzania) than in others (Cote d'Ivoire, South Africa, and Zambia).

HIV/AIDS will continue to have a profound, though varying, effect on many African countries. The direct impact is especially great on girls and women. Throughout Sub-Saharan Africa young women (aged 15-24) are twice as likely as young men to be

living with HIV/AIDs, though in South Africa they are estimated to be three times more likely than young men to be infected. Especially in countries, and areas of countries, with very high prevalence, HIV/AIDS has complex implications not just for the age composition of the female labour force but also for wider and inter-generational implications for the quantity and quality of labour supplies. Meanwhile, it is extremely difficult, given presently available evidence, accurately to assess and predict the impact of HIV/AIDS on child labour supplies. It is also difficult to extract this impact from the varying 'background' child mortality in uninfected children.

The proportion of children who work, as a percentage of the age cohort, does seem to vary considerably between countries, which may suggest some scope for government policies to reduce the incidence of child labour. To some extent, children's labour market participation is influenced by levels of poverty; however, there are other family characteristics that influence child labour supplies, and these sometimes appear stronger than income levels. Furthermore, there are dramatic differences between countries in the percentage of the relevant age group that is orphaned (e.g. less than 6 percent in Ghana but more than 12 percent in Uganda and Mozambique) as well as in the absolute numbers of orphans.

There is a relatively high proportion of young people in the working age population of all Sub-Saharan African countries, compared to other developing regions; this proportion is expected to remain fairly constant between 2000 and 2015, while it is projected to decline, e.g., in South-Eastern Asia. Differences in fertility rates clearly affect this phenomenon. However, it is also affected by the fact that more youths stay in education longer in other developing regions. Therefore, education policies may be effective in counteracting the effect of the relatively slow decline in fertility rates in Sub-Saharan Africa. These policies would need to focus on reducing primary school dropout rates and increasing the transition from lower to higher levels of education.

3. The Quality of Labour in the Future: Nutrition, Health, and Educational Status

3.1 Cross-Country Comparative Data: Life Expectancy, Literacy, Nutrition and Mortality

At the most basic level, since productivity is partly determined by years of experience in work, relatively short working lives, or a small share of older people in the population aged 15-64 years (see Table 3), mean that low levels of life expectancy are likely to have directly adverse effects on labour productivity. Moreover, life expectancy may also be considered a good proxy for several other aspects of individuals' welfare that will influence their capacity to work productively, including their nutritional status and morbidity, etc (McGillivray and White, 1993). It is, therefore, important to emphasise the scale of differences in life expectancy between countries, and to note trends in cross-country differences in the size of the gender gap in life expectancy, since this gap is likely to have important effects on the quality of future labour supplies. Similar arguments apply to differences in literacy rates across countries and to differences between countries in the size of the gender literacy gap,

although the data on literacy is generally considered to be less robust and comparable than the data on life expectancy.[19]

Table 7 provides UN Population Division life expectancy estimates for two periods, 2000-2005 and 2010-2015. In the first period, the range of female life expectancy across African countries is huge - from about 30 years to about 60 years - and females can expect to live 4- 5 years longer than males in some countries, while in others their life expectancy is about the same as that of males. By the second period these significant differences between countries are projected to *increase*. For example, female life expectancy in Ghana will be more than 33 years longer than in Swaziland and female life expectancy will have fallen below that of males in several countries.

These differences between countries may be explained, in part, by the differential prevalence and stages of HIV/AIDS (as discussed in Section 2, above), but there are other indicators of women's status that also vary dramatically between countries and are not closely correlated with national HIV/AIDS statistics. For example, over half of young women were illiterate in Ethiopia, Mauritania, Senegal and Mozambique in 2000, while less than 15 percent of young women were illiterate in Ghana, Kenya, Lesotho, South Africa, Swaziland, Tanzania and Zambia (Table 7). Some countries already had small or no gaps between the illiteracy rates of young females and males in 2000, but others had very large gender gaps (of the order of 29 percentage points in 2000) and the gaps will still be large (between 10 and 17 percentage points) in Mozambique, Malawi, Senegal and Mauritania by 2015.[20]

It is safe to predict that the children of illiterate mothers will face relatively high risks of undernutrition, morbidity and inadequate schooling; they will enrol later, leave at an earlier age, and perform relatively poorly in educational attainment tests (Morrisson, 2002: 10; Filmer, 2003) and, as a consequence, their labour productivity will be low. Thus, the quality of the future supply of labour in six countries where between a quarter and half of young women remain illiterate in 2015 is likely to be very inferior to that in the other eight countries listed in Table 7.

[19] Most of the available data is based on reported rather than tested literacy and in some cases are derived from other proxy information. Moreover, definitions are not necessarily standardized. And the field experience of the authors of this paper suggests that it is difficult to discern the value of a particular school grade across very different education systems. In some countries, attending the first 2-3 years of primary school may be sufficient to acquire literacy and numeracy skills, while in other countries or in other periods, pupils in higher grades cannot be regarded as literate. Furthermore, in some countries, particularly in the Sahel, informal systems of schooling, based on different types of Koranic and Franco-Arab schools, are frequently ignored in the official statistics, which may result in underestimation of effective literacy (in Arabic).

[20] The impact of gender gaps in educational attainment on economic growth and on other variables, including *male* life expectancy, is discussed in King and Hill, 1993: Chapter 3.

Table 7: Estimated and Projected Life Expectancy at Birth and Youth Illiteracy Rates, By Gender

	Life Expectancy at Birth (Medium Variant) 2000-2005*		Life Expectancy at Birth (Medium Variant) 2010-2015*		Illiteracy Rate (%) 15-24 Years Old** 2000		Illiteracy Rate (%) 15-24 Years Old** 2015	
	Female	Male	Female	Male	Female	Male	Female	Male
Côte d'Ivoire	41.2	40.8	45.8	45.0	48	29	29	20
Ethiopia	46.3	44.6	48.8	47.5	51	39	30	26
Ghana	59.3	56.5	62.9	60.5	11	6	3	3
Kenya	45.6	43.5	44.9	45.0	6	4	1	2
Lesotho	37.7	32.3	32.3	32.0	1	17	1	13
Malawi	37.7	37.3	39.1	40.2	39	19	26	13
Mauritania	54.1	50.9	58.1	54.9	59	43	50	40
Mozambique	39.6	36.6	39.5	39.1	54	25	32	15
Senegal	55.1	50.8	59.1	54.8	58	40	39	28
South Africa	50.7	45.1	40.5	42.3	9	9	6	6
Swaziland	35.4	33.3	29.6	31.1	9	10	4	5
Uganda	46.9	45.4	56.2	53.8	28	15	15	9
Tanzania	44.1	42.5	47.4	45.6	12	7	4	4
Zambia	32.1	32.7	34.6	35.9	14	9	7	5
SSA Total (35 Countries, Weighted)	46.7	44.8	48.0	47.3				
Eastern Asia	74.7	69.7	76.5	70.4				
South-central Asia	63.9	62.5	66.9	64.9				

*United Nations Population Division (2003); ** http://www.uis.unesco.org (July 2004).

The scale of the difference in predicted outcomes for children born in different Sub-Saharan African countries is also reflected in comparative data on child nutrition and child survival rates (Table 8). Many studies have demonstrated associations between undernutrition and growth retardation, impaired mental development and increased susceptibility to infectious diseases. In Sub-Saharan Africa, recent work suggests that undernutrition and micronutrient deficiencies are causing large numbers of children to suffer from malaria, while Vitamin A deficiency, affecting between 28 and 35 percent of children in different parts of Africa, is a major cause of blindness (Caufield et al: 2004). In addition, micro-level evidence demonstrates a significant relationship between preschooler nutritional status and the number of years of schooling they can complete, as well as their labour productivity as adults (Alderman et al, 2003). Thus, the data on the prevalence of undernutrition presented in Table 8 suggest that the quality of the future labour force in Ethiopia, where more than half of children under five years old suffer from moderate or severe stunting and 16 percent of children are severely underweight, will be much lower than the quality of future labour supplies in other Sub-Saharan African countries (including Cote D'Ivoire, Ghana, Lesotho, Senegal and South Africa), where roughly a quarter or less of children suffer from moderate and severe stunting and six percent or less suffer from severe underweight.

The differential risks faced by children are well illustrated in the data on the levels and trends in Under-Five Mortality Rates (Table 8). Some countries combine both very high levels of Under-Five Mortality and a weak record in reducing this rate over the period 1990 to 2002 (Zambia, Mauritania). Others have quite high current rates and a disastrous record in terms of reducing Under-Five Mortality Rates (Swaziland,

Kenya, and Cote d'Ivoire). In contrast, Malawi and Mozambique have achieved large reductions in the Under-Five Mortality Rate since 1990, but still have extremely high current rates. Ghana, which currently has an Under-five Mortality Rate that is about half that of Mozambique and Zambia, has been successful in reducing its rate (by 21 percent since 1990). These results confirm the heterogeneity of Sub-Saharan African countries in terms of their current ability to ensure child survival and their recent record in achieving improvements in child survival.[21] They also provide another clear, policy relevant indication of those countries where the quality of the current female labour force is likely to be particularly low, since maternal undernutrition and illiteracy are strongly associated with high rates of child mortality.

Table 8: Under-Five Malnutrition, Mortality and Reductions in Mortality Rates

	% of Under-Fives (1995-2002) Suffering From		Under-5 Mortality Rate (2002)		
	Underweight (Severe)	Stunting (Moderate and Severe)		Average Annual Rate of Reduction 1990-2002 (%)	Reduction Since 1990 (%)
Côte d'Ivoire	5	25	176	-1.1	-14
Ethiopia	16	52	171	1.5	16
Ghana	5	26	100	1.9	21
Kenya	6	35	122	-1.9	-26
Lesotho	3	12	87	2.7	28
Malawi	6	49	183	2.3	24
Mauritania	10	35	183	0.0	0
Mozambique	-	44	197	1.5	16
Senegal	6	25	138	0.6	7
South Africa	2	25	65	-0.7	-8
Swaziland	2	30	149	-2.5	-35
Uganda	5	39	141	1.1	12
United Republic of Tanzania	7	44	165	-0.1	-1
Zambia	7	47	192	-0.1	-2
Total (Sub-Saharan Africa, 35 Countries, Weighted)	8	38	174	0.3	3
South Asia	17	44	97	2.3	24

Source: UNICEF, Basic Indicators 2004 (http://www.unicef.org/sowc04/sowc04_tables.html)

Sub-Saharan Africa's development experience since 1945 is often unfavourably compared with the development performance of certain East Asian and Latin American developing economies. Such comparisons too often ignore the fact that, for example, 80 percent of adult females were already literate in Chile by the early 1950s, more than 50 percent were literate in Mexico and the Philippines, and over a third were literate in Thailand. They also ignore the fact that, in 1960, the average level of schooling of the working age population was only 1.3 years in Sub-Saharan Africa, compared to 3.8 years in Latin America and the Caribbean and 2.3 years in East Asia and Pacific (OECD New Database, 2002:12).[22] Thus, the starting points for improvements in human development and labour productivity were by no means

[21] Econometric work on the determinants of the capacity of different Sub-Saharan African countries to reduce under-five mortality is noted below in Section 4.3.

[22] Although the annual average growth rate of schooling between 1960 and 2000 was slightly faster in SSA than in East Asia and Pacific (2.7% vs. 2.6%), average schooling in SSA by 2000 was only 3.9 years, compared to 6.4 years in EAP (ibid).

comparable, suggesting that considerable caution should be applied before assuming that all Sub-Saharan economies should or could have replicated some of the post-war successes of the NICs (Sender, 1999: 92; Platteau, 1996).

3.2 Intra-Country Differentials in Education and Health Status

If appropriate policies are to be developed, it is not sufficient to highlight enduring disparities in the growth rates of labour supply and in the quality of labour available in different Sub-Saharan economies. It is also necessary to emphasise the degree of differentiation *within* each of these economies. A focus on inter-country differences may avoid the dangers of crude Africa-wide policy prescriptions to improve the quality of labour supply. It might also support arguments for reallocating Official Development Assistance towards particularly vulnerable countries in Africa, ending the trend bias in the 1990s away from the poorest countries (White, 2002: 12). However, inequalities in the *intra*-country distribution of education, health, sanitation and other services mean that the labour supply from some regions, districts or households will continue to exhibit very different capacities to work productively.

There has been a great deal of recent research comparing the relative degree of inequality in the health and education of the populations of countries in SSA. This research, based on comparable DHS data, confirms the persistence of substantial variation in, e.g., the extent of the urban-rural divide in standards of living. Thus, although living standards in rural areas of SSA generally lag far behind those in urban areas, the size of the lag is very much greater in some countries than others. However, focusing on *rural* education/health standards would not be sufficient to reduce national inequalities, since most of the inequality in these countries is comprised of inequalities *within* rural and urban areas (Sahn and Stifel, 2004).

Inequalities in several indicators of human welfare are far greater in rural than in urban areas. For example, the Theil index of education inequality, based on attainment data (i.e. the ultimate year of schooling for the population of working age[23]), is much higher in the rural than the urban areas of all countries in Table 9.[24]

[23] Here defined as people 15 to 40 years old.

[24] The Theil measure is used because it is decomposable into groups, i.e. it can be decomposed into the sum of within and between region (urban or rural) contributions to inequality, to indicate the degree to which a reduction in inequality *between* rural and urban areas would reduce overall inequality. This measure is the basis for the conclusion that the contribution of inequality *within* rural regions predominates in Sub-Saharan Africa (ibid: 22).

Table 9: Inequalities in Educational Attainment

Country: (date of DHS)	Percentage Without Any School				Theil Inequality Measures		
	National	Rural	Urban	Gini	National	Rural	Urban
Cote d'Ivoire (1994)	48	57.3	36	0.622	0.777	0.978	0.553
Ghana (1998)	21.1	26.9	11.1	0.378	0.318	0.397	0.185
Kenya (1998)	6.3	7	4.3	0.253	0.135	0.142	0.096
Malawi (1992)	33.2	36.6	14.3	0.522	0.537	0.587	0.245
Mozambique (1997)	33.5	40.8	13.5	0.547	0.582	0.686	0.264
Senegal (1992)	64.3	83.9	38.4	0.796	1.551	2.654	0.871
Tanzania (1999)	18.2	21.8	8.7	0.305	0.265	0.303	0.163
Uganda (1995)	22.2	24.8	8.1	0.431	0.37	0.399	0.168
Zambia (1996)	9.7	15.2	3.1	0.305	0.193	0.259	0.097

Source: Sahn and Stifel, (2004, 24)

Table 9 shows that rural inequality in education attainment is generally high, but far greater in some countries than in others. For example, the rural Theil index for Senegal is 2.654, compared to a rural Theil index of 0.142 for Kenya. Similarly, indicators of the health status of rural and urban populations show significant variations in the size of rural-urban gaps. Theil indices confirm that rural inequality in health is far worse in some countries than in others (Table 10).[25] For example the rural Theil index for health inequality is 1.7229 in Kenya and only 1.012 in Tanzania.

Table 10: Rural and Urban Health Inequality

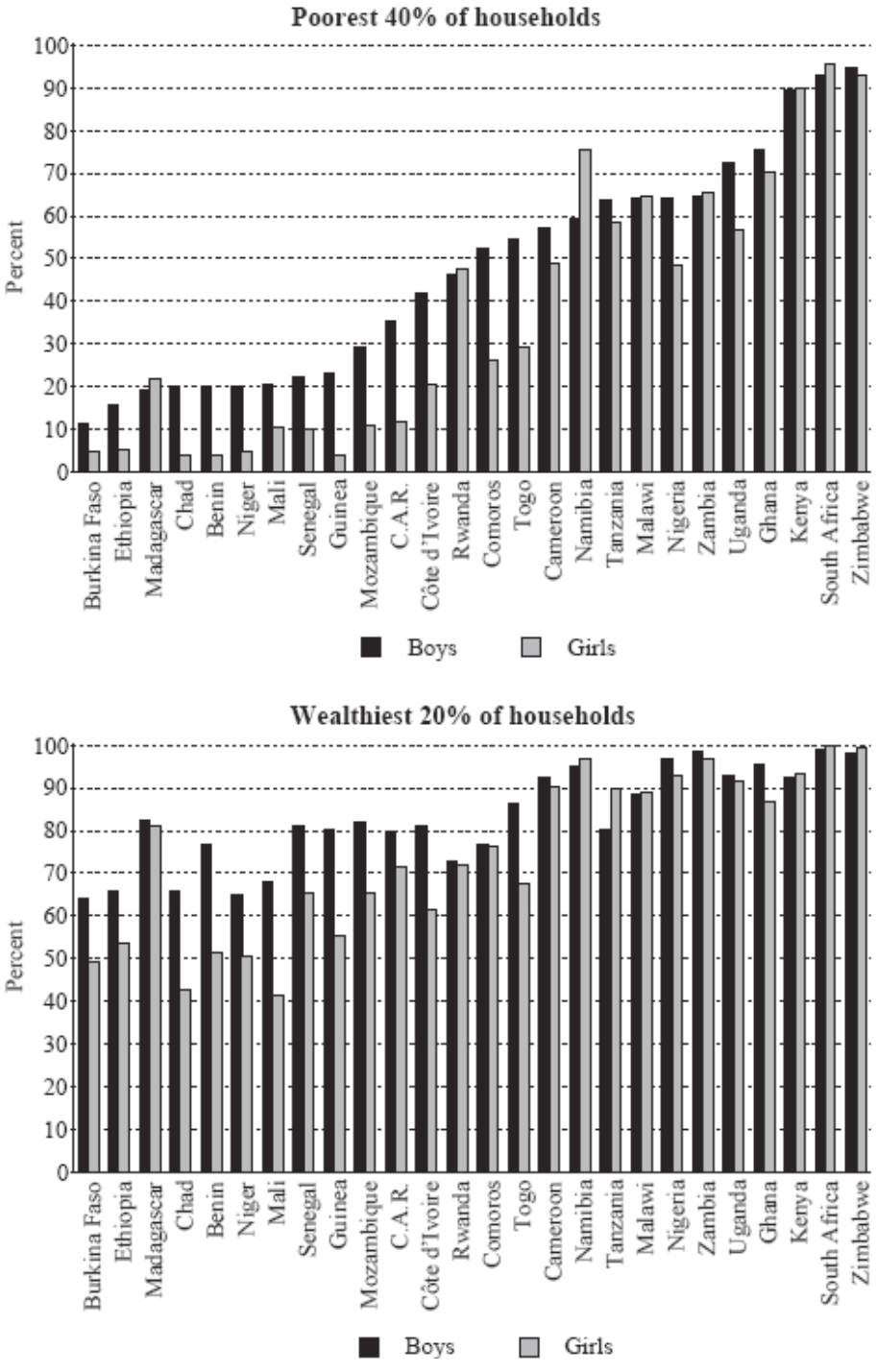
Country (and DHS Date)	Gini	Theil Measure (NCHS Adjusted)	Rural Theil Measure (NCHS Adjusted)	Urban Theil Measure (NCHS Adjusted)
Cote d'Ivoire (1994)	0.034	1.241	1.4337	0.7108
Ghana (1998)	0.0331	1.0964	1.1325	0.8554
Kenya (1998)	0.0379	1.759	1.7229	1.6867
Malawi (1992)	0.0356	1.4337	1.4096	1.2048
Mozambique (1997)	0.0383	1.8072	1.9036	1.4096
Senegal (1992)	0.0339	1.2169	1.3373	0.8193
Tanzania (1999)	0.032	0.9639	1.012	0.4578
Uganda (1995)	0.0346	1.3735	1.3976	1
Zambia (1996)	0.0355	1.4217	1.5904	1

Source: Sahn and Stifel, (2004;, 25)

[25] Sahn and Stifel measure inequality in health by the inequality in linear growth of children, since they argue that child height is a useful indicator of well-being. They assess the degree to which inequality of heights in the DHS samples, conditional on gender and age, differs from the inequality observed in the National Center for Health Statistics (NCHS) healthy reference population (2004:13).

The data contained in Tables 9 and 10, showing large disparities between countries in measures of health and educational status, as well as very different patterns and degrees of inequality, derive from research that does not attempt to analyse correlations between education/health status and income or other indicators of social stratification. However, the gaps between the health and educational status of poor and better-off households in Sub-Saharan Africa are very substantial and the asset/expenditure levels of African households do appear to be a good, if not perfect, predictor of the health and educational status of household members (Houweling et al., 2003; Gwatkin and Rutstein, 2000; Filmer and Pritchett, 2001). The evidence (see Table A4) indicates an almost complete lack of basic educational opportunities for poor girls in Ethiopia, Senegal, Mozambique and Cote D'Ivoire. Poor girls are significantly more likely achieve a basic education in Ghana, Malawi, Zambia and Tanzania, but only Kenya and South Africa have achieved nearly universal grade four attainment for both girls and boys (Figure 3). One clear implication is that the prospects for the supply of educated and productive labour, including the domestic labour of women who have the capacity to improve the nutritional status of their children, differ a great deal between different types of households in each Sub-Saharan African economy.

Figure 3


Poorest 40% of households
Percent
100
90
80
70
60
50
40
30
20
10
0
Burkina Faso
Ethiopia
Madagascar
Chad
Benin
Niger
Mali
Senegal
Guinea
Mozambique
C.A.R.
Côte d'Ivoire
Rwanda
Comoros
Togo
Cameroon
Namibia
Tanzania
Malawi
Nigeria
Zambia
Uganda
Ghana
Kenya
South Africa
Zimbabwe
Boys
Girls
Wealthiest 20% of households
Percent
100
90
80
70
60
50
40
30
20
10
0
Burkina Faso
Ethiopia
Madagascar
Chad
Benin
Niger
Mali
Senegal
Guinea
Mozambique
C.A.R.
Côte d'Ivoire
Rwanda
Comoros
Togo
Cameroon
Namibia
Tanzania
Malawi
Nigeria
Zambia
Uganda
Ghana
Kenya
South Africa
Zimbabwe
Boys
Girls

The case for a policy focus on improving the quality of labour supplied by the poorest rural households is reinforced when the growing problem of orphaned children (highlighted in 2.4 above) is considered. This is because orphaned children, on average, live in poorer households than non-orphans (and are more likely to live in households headed by females or less educated men). Although the low levels of education achieved by orphans is not solely due to their relative poverty (Case et al, 2002, 3; 22; 29-30), research based on longitudinal survey results stresses that parental deaths have very different impacts across socio-economic groups (Evans and Miguel, 2004: 18). It is clear that orphans living in poor households are likely to receive significantly less education than other children. Therefore, when these children do enter the labour market, their lack of basic literacy and numeracy is likely to confine them within poorly remunerated segments of the market. At present, about 90 percent of orphans are of school going age and there is a strong case for urgent policy initiatives aimed at keeping all orphans, but particularly those living in the poorest households, at school. Policy interventions in Botswana, including the provision of meals at school, seem to have had a significant impact on school absenteeism rates for orphans, which are much lower than in Malawi and Uganda (United Nations, 2004c: 72).

Another category of children, apart from those whose parent(s) have died, are also likely to complete few years of schooling and to enter poorly remunerated forms of employment. These are the children of women who become pregnant as teenagers, who are at risk partly because their mothers will have had so little success in the labour market (Sender, 2002; Sender et al, 2004). Table 11 shows that both teenage pregnancy and child stunting are much more likely to occur in the poorest quintile of households than in the richest, in all of the selected Sub-Saharan countries for which data are available. This Table also indicates that the labour productivity of women aged 15 to 49 years in the poorest quintile is likely to be much lower than that of women in the richest quintile; partly they are more likely to be malnourished, i.e. to have a Body Mass Index of less than 18.5. There is also evidence to suggest that high total fertility rates have adverse consequences for women's labour market performance, limiting women's mobility in labour markets, the total number of years of work experience they can gain and, therefore, their wages (Sender, 2003:37; Joshi et al, 1999:556). Table 14 shows that, in some countries, women in the poorest quintile of households have total fertility rates well over twice as high as those of women in the richest quintile. The poorest women are also likely to run higher risks of neo-natal mortality: they are far less likely than women in richer households to get adequate antenatal care or have births attended by medically trained personnel (Table 12). It has been suggested that African children whose mothers received antenatal care are generally healthier (taller) and do better at school (Morrisson, 2002: 9).

Table 11: Selected Indicators of Fertility and Health for Women and Children in the Richest and Poorest Households

Country	Percentage of Women Aged 15-19 Giving Birth in One Year		Percentage of Children Moderately and Severely Stunted		Percentage of Malnourished Women		Total Fertility Rate (Lifetime Births per Women)	
	Poorest Fifth	Richest Fifth	Poorest Fifth	Richest Fifth	Poorest Fifth	Richest Fifth	Poorest Fifth	Richest Fifth
Cote D'Ivoire	19	7	34	13	11	6	6.4	3.7
Ethiopia	8	7	53	43	32	25	6.3	3.6
Ghana	13	2	35	10	18	5	6.3	2.4
Kenya	16	6	44	17	18	6	6.5	3.0
Malawi	19	14	58	34	10	6	7.1	4.8
Mauritania	9	5	39	23	17	9	5.4	3.5
Mozambique	19	13	48	22	17	4	5.2	4.4
Senegal	15	4	..	..	..	..	7.4	3.6
South Africa	11	2	..	..	..	..	4.8	1.9
Tanzania	20	8	50	23	12**	7**	7.8	3.4
Uganda	23	11	43	25	15	5	8.5	4.1
Zambia	19	9	54	32	9	4	7.3	3.6

Source: Population Reference Bureau, 2004:2.
**1995-7 DHS (other Tanzanian data from 1999).

Table 12: Ante- and Neo-Natal Health Care in the Poorest and Richest Households

Country	Percentage of Women with 3+ Antenatal Care Visits		Percentage of Births Attended by Medically Trained Personnel	
	Poorest Fifth	Richest Fifth	Poorest Fifth	Richest Fifth
Cote D'Ivoire	26	75	17	84
Ethiopia	7	45	1	25
Ghana	59	91	18	86
Kenya	77	87	23	80
Malawi	77	86	43	83
Mauritania	16	75	15	93
Mozambique	30	75	18	82
Senegal	44	84	20	86
South Africa	78	90	68	98
Tanzania	82	93	29	83
Uganda	59	86	20	77
Zambia	80	92	20	91

Source: Population Reference Bureau, 2004:2.

3.3 Summary and Conclusions

Underpinning the prospects for future development of the quality of the labour supply in Sub-Saharan Africa are extraordinary inequalities in the health, education and life expectancy of populations in the region. These inequalities have direct implications for policy priorities. This section has stressed the scale of differences in life expectancy between countries as well as cross-country differences in the degree of a gender gap in life expectancy. Furthermore, the range of female life expectancies between countries, already striking, is projected to increase so that, e.g., female life expectancy in Ghana is likely to be some 33 years longer than in Swaziland by 2015.

The differential impact of HIV/AIDS obviously partly accounts for this trend but other factors also help to explain it. Thus, there are substantial variations in literacy levels and in literacy gender gaps between countries in Sub-Saharan Africa. Female illiteracy, which is particularly significant in countries like Ethiopia, Mauritania, Senegal and Mozambique and which also lags behind male literacy in these countries, is an important constraint on the quality of the future labour supply, given the association of illiteracy with high risks of child undernutrition, morbidity, and inadequate schooling. Levels of undernutrition, affecting health, schooling, and later productivity, also vary across countries. In Ethiopia, more than half of children under five years old suffer from moderate or severe stunting, compared to a quarter or less of children in this age group in countries like Ghana, Senegal and South Africa. Similarly, not only are there different levels of under-five mortality in different SSA countries, but also some countries have sharply reduced this level in recent years while others have experienced increases in under-five mortality rates.

These trends suggest very strongly the need to avoid Africa-wide policy prescriptions and to reallocate aid flows towards especially vulnerable countries. However, policy design also has to address the substantial inequalities *within* countries in the distribution of education, health and other services. The degree of inequality in education attainment, for example, is much higher within rural than urban areas of all countries in our sample. This rural education inequality is also much sharper in some countries – e.g. Senegal – than in others. There is an almost complete lack of education opportunities for poor girls in countries like Ethiopia, Senegal, Mozambique, and Cote d'Ivoire, though in some countries poorer girls are more likely to get a basic education. Much the same is true of the distribution of health services.

There is thus a strong case for prioritising resource allocations towards tackling the health and education provision for the poorest rural people. There is also an urgent need to implement policy initiatives to keep children and orphans, especially those living in poorer households, in school. Meanwhile, evidence of the poor health and education status of children of women who become pregnant as teenagers suggests another focus for policy initiatives, to overcome inter-generational traps of poverty and low productivity.

A further implication of the trends highlighted in this section is that effective policy design for improving the prospects of labour supply quality will require more focused empirical research, based on purposive sampling of the poorest quintile of the population. This point is taken up in Section 6.2, below.

4. Improving the Quality of Labour Supply: Constraints and Policy Opportunities

4.1 Introduction

The quality of labour supplied in each Sub-Saharan African economy will be influenced by the capacity to educate and to improve the health and skills of the next generation of workers. This Section will discuss these three aspects of labour quality, beginning with a discussion of capacity constraints in the education sector. However, it is important first to emphasise the shortcomings of the available data on schooling. Net enrolment rates are seldom available, precisely because school dropout and repetition rates are inaccurately recorded in many Sub-Saharan Africa countries (OECD New Human Capital Database, 2002; Behrman and Rosenzweig, 1994). If estimates of schooling are not adequate to characterise the quality of the labour force, alternative indicators are also difficult to come by. Reliable and disaggregated information on years of labour experience, probably an extremely important dimension of labour force quality, are rarely available. Data on training in the workplace are often missing in the available datasets. Firm and establishment surveys, almost the only data sources for this information (Recanatini et al, 2002), contain rather weak modules on employment and the quality of the labour force.[26]

The quality of African labour in the future will also depend on how the HIV/AIDS epidemic affects the skill composition of the labour force. There is some evidence that HIV/AIDS prevalence rates differ substantially across skill groups in the labour force and that the epidemic will have a differential impact on labour force growth by skill category. For example, in Southern Africa there appears to be an inverse relationship between HIV prevalence and skill class, with unskilled and semi-skilled workers having a much higher prevalence than their skilled, highly skilled or managerial counterparts.[27] Tracer studies comparing the mortality of university with secondary school leavers in Uganda, Tanzania, Malawi and Zimbabwe in the 1990s find that a very much higher percentage of the less educated secondary school graduates had died, many of them, presumably, from AIDS-related illness (Al-Samarrai and Bennell, 2003: 27). Given the current skill composition of the labour force, projected labour supply losses at lower skill levels far exceed losses at higher skill levels, although the epidemic is also anticipated to exacerbate skills shortages in the region.

However, the empirical basis for these projections remains extremely weak (Bennell, 2003). For example, the available estimates of HIV prevalence across industries do not provide reliable estimates of prevalence in the economy, since the samples are not representative of the industries or sectors concerned and, besides, estimates vary dramatically, even for the same types of companies in the same sectors. Prevalence estimates for mining companies in South Africa range from 5.5 percent to 29.5 percent and, for non-mining companies, from 0.2 percent to 21.5 percent (Booysen et al, 2003: 12). When public or private sector organisations in South Africa do provide data on HIV prevalence rates amongst their employees, they "limit information to

[26] The ILO's Enterprise Labour Flexibility and Security Survey instrument is an exception, but has only been applied in surveys in two African economies - South Africa and Tanzania (ILO, 2004c).
[27] Not all surveys confirm this relationship: e.g. in a Zambian survey prevalence amongst skilled workers was 26 percent, compared to 18 percent for unskilled/contract workers (ILO, 2004a: 17).

aggregate HIV/Aids prevalence rates with little or no information about the demographic, skills and occupational distribution of HIV/AIDS" (Vass, 2002: 6).

It is not possible to relate any national prevalence data to important socio-economic status indicators, including indicators of employment status, job categories, sectors of employment, levels of education, training and work experience (Booysen et al 2003:11). In part, this difficulty arises because of a more general problem with labour force surveys that only collect limited information on the work performed by the population of working age throughout the year, before lumping them into pre-determined, crudely dichotomous categories and sectors, i.e. economically (in)active, (un)employed, (in)formal, primary and secondary employment, etc. (see Section 6.1 below). However, it is not possible to relate even these flawed labour force data to national statistics on HIV prevalence.

The problem is exacerbated because DHS questionnaires fail to collect sufficient information on the types of work done by sero-positive and negative household members in different socio-economic strata. As a result the precise impact of HIV/AIDS on the quality of the labour force, especially on those working in the very large, unenumerated sector in African economies, is poorly understood.

4.2 Teachers and Conditional Cash Transfers for Schooling

The education required by new entrants to the labour force, according to potential employers, is the basic literacy and numeracy essential for rapidly acquiring the skills to do their jobs (Godfrey, 2003: 13). The capacity to provide such education in schools will depend, in part, on the local severity of the HIV/AIDS epidemic. However, it also depends on the policies implemented by individual countries, including the history and pattern of their investment in education and health since 1945, as well as upon the outcome of investment efforts in more recent decades, reflected in Tables 7-12. Obviously, past policies and current capacity vary widely between countries.

In most Sub-Saharan countries, the school age population is projected to continue to grow up to 2010 despite the effects of the HIV/AIDS epidemic (United Nations, 2004c: Chapter VI). The *quantitative* output of schools in most countries depends, therefore, on enrolment and completion rates, which may be affected by several factors, including the available supply of teachers. If HIV/AIDS results in the death, illness and absenteeism of increasing numbers of teachers, (and reduces the effective numbers of education sector administrators, planning and finance officials, etc.), then the *quality* of schools' output will also be affected. However, there is no reliable evidence to suggest that prevalence is particularly high amongst school teachers, although it does appear to be significantly higher among primary school teachers than among teachers in secondary schools (Bennell, 2003b: 16).

In fact, there is little comparable cross-country evidence on reductions in teacher supply attributable to HIV/AIDS mortality and morbidity. A Zambian study suggested that the number of teacher deaths in 1998 was equivalent to the loss of about two thirds of the annual output of newly trained teachers. In Malawi, about 10 percent of education personnel in urban areas were estimated to have died of AIDS by 1997, and it was projected that this figure would rise to 40 percent by 2005. In

KwaZulu-Natal, an area with even higher prevalence rates, mortality among teachers increased very rapidly between 1997 and 2001 in a sample covering 100 schools (United Nations, 2004c: 71). In this Province, it has been estimated that, out of the current cohort of 75,000, no less than 65,000 teachers will have been lost by 2010, as a result of emigration, natural (non-AIDS) attrition and AIDS mortality (Whiteside, 2003: 27). However, it has also been argued that the trend in teacher mortality is downwards and not upwards in a number of countries, including Botswana, Uganda and Zambia and that, "projected morbidity and absenteeism rates for teachers are little more than inspired guesses" (Bennell, 2003b:8).[28]

The ability to maintain or expand the supply of teachers in rural areas will depend, in part, on teacher training capacity. It may be assumed that the underlying capacity to expand the supply of skilled personnel to the education sector (and to other key sectors, including health and technical skills provision) is limited in those countries that have relatively low numbers of students enrolled in the tertiary sector. Table 13 provides some information on the numbers enrolled in the Tertiary Sector. Tertiary enrolment, as a percentage of the relevant age group, is especially low in Tanzania, Mozambique, Malawi and Ethiopia.

However, the annual average rate of growth of tertiary enrolments, where the data allow this to be calculated, appears to have been rather rapid in several Sub-Saharan African countries, including those countries starting from a very low capacity base: e.g., 16.9 percent in Tanzania, 12.5 percent in Mozambique and nearly 10 percent in Ethiopia in the years after 1993; and over an earlier period (1985-1990) 11.3 percent in Malawi (http://www.adeanet.org). In Zambia, teacher-training capacity was increased dramatically from less than 2,000 to nearly 6,000 in the late 1990s (Bennell, 2003b: 38). These growth rates suggest that there is scope for policy interventions to achieve quite rapid responses to inadequate capacity, or to AIDS-related declines in the numbers of teachers and other key personnel with post-secondary education.

Table 13: Tertiary Enrolment and Gross Enrolment Ratios, (Most Recent Data)

	Total Tertiary Enrolment (Thousands, Latest Available Year)	Gross Enrolment in Tertiary Education as Percentage of the Age Group
Cote d'Ivoire	55 (1994)	4.5
Ethiopia	32.7 (1994)	0.7
Ghana	19 (1990)	1.4
Kenya	33.5 (1990)	1.6
Lesotho	4.6 (1996)	2.4
Malawi	5.6 (1995)	0.6
Mauritania	8.5 (1995)	3.9
Mozambique	7.1 (1996)	0.5
Senegal	24.1 (1994)	3.4
South Africa	690 (1995)	15.9
Swaziland	5.7 (1996)	6.0
Tanzania	12.28 (1995)	0.5

[28] Similar uncertainties affect published estimates of the mortality and morbidity of skilled health sector workers.

Uganda	34.8 (1996)	1.7
Zambia	19 (1994)	2.4
Sub-Saharan Africa	2,017 (1996)	

Source: Association for the Development of Education in Africa, 2004: http://www.adeanet.org

Other policy interventions may be effective in improving the poorest children's access to education, or reducing the impact of declines in teacher numbers due to HIV/AIDS. Rural schools typically have high levels of staff turnover and attrition, as well as high pupil: teacher ratios, for reasons that have little to do with HIV/AIDS. On aggregate, teacher supplies may be quite high at the national level, but the distribution of teachers to particular types of school can be influenced by promotion structures, salaries and other incentives. More important, the ability of the poorest rural children to complete primary schooling has been shown to be determined less by supply side factors than by the demand side, especially the socio-economic characteristics of the households in which these children live. In Mozambique, for example, "Policy simulations comparing the impact of different policy interventions on rural primary school enrolment rates reveal that changes in demand-side (for example, household characteristics) dominate supply-side factors in their impact on children's schooling" (Handa et al, 2004: xi).

The most cost-effective policy intervention in these simulations was to invest in female adult literacy campaigns in rural areas, since having a literate mother greatly increases the probability that a poor rural child will attend school. However, household incomes also influence children's educational attainment and it should be possible to replicate the success of policies in other developing countries that provide a monthly income payment to mothers on condition that their children go to school. The relevant policies include the *Bolsa Escola* in Brazil, *PROGRESA* (recently renamed *Oportunidades*) in Mexico, and others in Bangladesh, Columbia, Nicaragua, Honduras and Jamaica (ILO, 2004d: 382-4). The relevance of policies targeting such conditional transfers on the poorest African rural women has recently been accepted by the World Bank, which also now recognizes the scope to improve the educational attainment of the poorest rural labour market entrants through much greater efforts to eliminate user fees in primary education. These fees are still widespread in Sub-Saharan Africa (Kattan and Burnett, 2004).[29]

The most systematic review of the evidence suggests that the impact of HIV/AIDS on schooling in Sub-Saharan Africa need not be catastrophic, pointing to the example of Uganda, a high prevalence country, which was able to introduce universal primary education and where secondary enrolments have increased very rapidly since the late 1990s (Bennell 2003b: 46). There is also other recent evidence of rapid change in the provision of schooling. For example, in Malawi, there has been a pronounced pro-poor shift in the benefit incidence of public spending on education. The share of benefits from primary spending accruing to the poorest quintile increased from 15

[29] "Poverty targeting measures are required when …the difference in access to services between poor and nonpoor is wide. Subsidizing education, waiving the uniform obligation, and supporting the health and nutrition needs of the poorest children would contribute to an improvement in the welfare of the neediest [Orphans and Vulnerable Children]. In such circumstances, conditional cash transfer programs, with a significant element of self-targeting as appropriate, appear promising…" (Subbarao and Coury, 2004: 98).

percent in the early 1990s to 25 percent in the late 1990s. A similar pro-poor shift occurred at the secondary education level (Davoodi et al., 2003:26).

4.3 Health Workers

Recent cross-country research suggests that there is a positive relationship between health worker density and health outcomes as measured by under-five mortality, (which is a reasonable proxy for labour quality and productivity). The total number of physicians, nurses and midwives per population has a positive effect on mortality rates over and above the effects of income, education and poverty levels (Anand and Baernighausen, 2004), suggesting that efforts to increase the number of health workers could make a significant contribution to the health status and the quality of labour in the low health worker density countries in Sub-Saharan Africa. However, the total number of health professionals in Sub-Saharan Africa is very low in comparison to other developing regions of the world – estimated at only about 600,000, which translates into a density of about 1 health worker per 1000 people – (Joint Learning Initiative, 2004: 29).

Table 14 shows the huge gaps between the health worker densities across SSA. Ethiopia and Uganda have densities below 0.25, and Malawi and Mozambique also score badly (0.31). In contrast, densities are very much higher in Kenya (1.03), Ghana (0.93) and those economies where densities are well over 1.0 and health expenditures per capita are also very much higher. Donor expenditures have by no means begun to redress these imbalances (Joint Learning Initiative, 2004: Table A2.4). In addition, they have been uncoordinated. Typically, each donor project has its own different priorities and there are overlapping health staff training and incentive sub-systems, which usually operate outside government health systems and have undermined staffing in state structures and systems (USAID, 2003: 36; Pfeiffer, 2003).

Table 14: Distribution of Health Personnel in Sub-Saharan Africa, (2003 or Most Recent Available Data)

	Human Resources for Health Index[1]	Density of Physicians (per '000 Population)	Density of Nurses and Midwives (per '000 Population)
Cote d'Ivoire	0.55	0.09	0.46
Ethiopia	0.23	0.03	0.21
Ghana	0.93	0.09	0.84
Kenya	1.03	0.13	0.90
Lesotho	1.12	0.05	1.07
Malawi	0.31	0.05	0.26
Mauritania	0.86	0.14	0.72
Mozambique	0.31	0.02	0.28
Senegal	0.36	0.08	0.29
South Africa	4.57	0.69	3.88
Swaziland	3.38	0.18	3.20
Tanzania	0.39	0.02	0.37
Uganda	0.14	0.05	0.05
Zambia	1.20	0.07	1.13

Source: Joint Learning Initiative, 2004: Table A2.1

1. A measure of health worker density based on the total number of doctors, nurses and midwives per thousand population

Data on the impact of HIV/AIDS on the supply of health workers is patchy. Nevertheless, it has apocalyptically been claimed that, "An entire generation of health workers is being lost in the epidemic countries of East and southern Africa" (USAID, 2003), although it is clear that there are many other causes, apart from premature deaths, for the scarcity of health workers relative to population needs. Above all the high concentration of health workers in urban and curative facilities, rather than rural and preventative services, remains the norm in SSA, as does expenditure on clinical training as opposed to more relevant public-health training.

Most of the disease burden affecting the quality of labour in Sub-Saharan Africa is accounted for by communicable disease and could effectively be addressed by community nurses. Besides, there is general agreement that it will not be feasible, within the next decade, for Africa to achieve a very substantial increase in the number of doctors and professional nurses. Therefore, it is recommended that, "A more appropriate strategy would focus on building up cadres of briefly trained and well-supported auxiliary workers who can perform core basic functions" (Joint Learning Initiative, 2004: 73). Yet the emphasis in Africa continues to be on the training of degree-level or registered nurses (RN), as opposed to community health or enrolled nurses (EN), despite the fact that the professional nurse training programme typically costs 30 percent more than the EN programme and takes up to twice as long (USAID, 2003: 8). One consequence of expenditures on inappropriate and internationally transferable skills is the large-scale emigration of health professionals (see Section 5.3, below).[30] More generally, the lack of relevance for the poor of the current pattern of health expenditure in Sub-Saharan Africa is highlighted by the finding that only 13 percent of the benefits of public expenditures on health accrue to the poorest quintile of households, as opposed to an average of almost 29 percent to the richest quintile. Even expenditures on Primary Health Care are poorly targeted, benefiting the richest households in Sub-Saharan Africa far more than the poorest (Table 15).

Table 15: Benefit Incidence of Public Spending on Health in the 1990s (Unweighted average; in percent of total spending)

	All[1]		Primary Health Care[2]		Health Centres		Hospitals	
	Poorest	Richest	Poorest	Richest	Poorest	Richest	Poorest	Richest
Sub-Saharan Africa	12.9	28.6	15.3	22.7	14.5	23.7	12.2	30.9
Western Hemisphere	23.1	15.2	20.4	19.1	19.1	19.9	17.0	22.2

Source: Davoodi et al, 2003: 25
1. Includes more than hospitals and health centers.
2. Refers to one of the following categories: health centers, clinics, child health, and preventive care.

Thus, a focus on meeting the basic health needs of the poorest members of the rural labour force would require a major shift in the pattern of both donor and government expenditures on health. Such a shift is unlikely to occur in contexts where the bargaining power or "voice" of poorer workers remains weak, relative to the ability of

[30] For example, out of the more than 600 doctors trained in Zambia since independence, only 50 remain (ibid: 11).

an elite of health professionals and their relatively rich urban patients to insist on continued state subsidies for high cost facilities.

4.4 Vocational Education, Training and Skills

There is general agreement in the literature that the existing provision of technical and vocational education and training (TVET), including training provided by employers in the private sector, by NGOs and by the state, does not benefit the poorest members of the labour force. The irrelevance of existing provision for poor rural women and youth is particularly striking (Johanson and Adams, 2004: 178-9; Bennell, 1999: 6,19; Haan, 2002: 79-81). One review notes that, "the failure of … training institutions to reorient their activities in favour of the poor is part of a wider political problem. In particular, pro-poor training reforms will invariably threaten powerful vested interests" (Bennell, 1999: 41).

This political problem has similarities with the problems (discussed in the previous Sub-Section) faced by attempts to re-orientate the training of health professionals. The relative bargaining power of the vast majority of young, disadvantaged labour market entrants who live in rural areas is weak. These young people are often scattered and dispersed across vast swathes of countryside. They face high transportation costs and these, in turn, make it costly to construct and equip a sufficient number of primary schools and to recruit and retain teachers in rural areas. In contrast, the teenagers and young adults living in urban areas constitute a rather powerful and vocal part of the population and, in many Sub-Saharan African countries, appear to have a relatively significant impact on political processes. Governments have reason to fear riots by secondary school students in the largest cities. These structural features may be used to understand the political economy of the relatively high degree of bias towards expenditures on students in the upper levels of secondary schools and in tertiary education, as well as training systems that are biased so that, "The principal beneficiaries are urban males from relatively well off background who attend training institutions in order to acquire qualifications that give them access to high paying … jobs in the formal sector" (ibid:19).

Thus, although several African governments are devoting quite a large proportion of their budgets to various types of education, they have few resources available to improve quality and expand the rural primary school system, because over half of total expenditures are allocated to secondary and tertiary education (Berthélemy, 2004: 24). The immediate beneficiaries of these expenditures are the children of the wealthiest and best educated parents in Africa, as has been shown in research on the socio-economic background of recent university and secondary school graduates in Uganda, Tanzania, Malawi and Zimbabwe (Al-Samarrai and Bennell, 2003: 22-23).[31]

One rationale for devoting both government and donor resources to politically vocal young labour market entrants is the belief that there is a growing crisis of unemployment in Sub-Saharan Africa, exacerbated by the lack of appropriate skills amongst the young. Thus, well-publicized efforts have been made to estimate the statistics for youth "unemployment" and these are reflected in the Millennium Development Goals. However, these estimates effectively ignore the labour market

[31] Both secondary school and university graduates in these surveys appear to spend a considerable proportion the time since graduating unemployed and looking for work (ibid: 61).

problems of the very large number of disadvantaged young people in rural Sub-Saharan Africa who simply cannot afford to be "unemployed" in the standard, internationally comparable ILO definition of open unemployment.[32] There is an emerging, if belated, consensus that "unemployment" is only one indicator of labour market outcomes for youth and that, in all economies with very large agricultural, unenumerated or "informal" sectors, it is usually not the best, or even a particularly useful indicator (Betcherman et al, 2004: 34).

Thus, some published data on unemployment in Sub-Saharan Africa make little sense. For example, ILO data suggest that "unemployment" rates in 2003 were no less than five times higher in Southern than in Western Africa (Table A12), but this surely indicates differences in statistical coverage, survey methods and definitions rather than real differences in labour market performance and outcomes. Of course, some young people in Sub-Saharan Africa are "unemployed" in terms of this standard definition, but they tend to be concentrated in urban areas, to have completed at least some secondary schooling, to have educated parents and to live in wealthier households (Standing et al, 1996; Godfrey, 2003: 5; Collier and Lal, 1986).

Unemployment of this kind is typically transitional, depending on the size of the cohort leaving the higher levels of the education system, the average length of time taken to find a job and lags in changes in expectations about appropriate types of job. Godfrey concludes that "the proportion of the disadvantaged young who are unemployed will vary from country to country and in many *will be quite small*" (2003: 8). The ILO also recognizes that,

> "In several developing countries, young people of higher socio-economic backgrounds are over-represented in the unemployment numbers because it is only they who can afford to spend time looking for work, without incoming wages" (ILO, 2004b: 8).

Another rationale for current training efforts, particularly the new concentration in the 1990s on training for the informal sector (Johanson, 2002), is the belief that the rate of growth of employment opportunities, especially self-employment opportunities, in this sector is constrained by the lack of entrepreneurial and other skills. It is believed that appropriate training would enable new entrants to this sector to escape from poverty and that it can best be supplied by non-public delivery systems.[33] Yet there is little evidence demonstrating that TVET succeeds in upgrading the necessary skills for successful entrepreneurship, or even for adequate survival, on the basis of self-employment in this demand-constrained and saturated sector (Barasa and Kaabwe, 2001; Johanson and Adams, 2004:51; Haan, 2002: 80).[34] There is also insufficient evidence to support the view that there are real opportunities for the poorest, least visible rural labour market entrants to escape from poverty through self-employment.

[32] The poorest young people are, of course, "too busy working to have time to enrol on training courses of any kind" (Bennell, 1999: 19).

[33] The enthusiastic donor support for non-government training persists despite the fact that, "reliable information on the scope and performance of non-government training is difficult to find in most countries" (Johanson and Adams 2004: 6).

[34] In fact, "very little is actually known about the fate of the training graduates and thus of the usefulness of the skills imparted. In other words, the training courses are not based on pre-training skills needs assessments; nor is the post-training impact tracked through tracer studies. (Haan, 2002: 81).

There has been far too little detailed research on the specific labour market characteristics of the disadvantaged youth, or the poorest young labour market entrants, to establish their geographic and sectoral concentrations and how many of these young men and women are:

1. badly paid wage earners in casual or seasonal jobs;
2. apparently self-employed traders, construction workers etc, but in reality working on commission or for low daily wages;
3. engaged in poorly remunerated, distress forms of self-employment;
4. unpaid workers in family operated enterprises with little potential to increase labour productivity;
5. engaged in caring for the children they have had as teenagers, or for the children of other family members;
6. engaged in viable and potentially expanding, or at least sustainable, forms of self-employment or family enterprise, but constrained by lack of access to training (and/or micro-credit).

It is not adequate simply to assume that a high proportion of the population aged 15-24 years who are not currently attending schools can be classified as falling into category 6, still less that they can be classified as "unemployed". Yet, in the absence of up-to-date and reliable surveys of the labour force employed outside the small registered or enumerated, "formal" sector, these assumptions are often made.[35] It would probably be more realistic to develop policy on the assumption that poverty-reducing growth has always been associated with *declines* in the proportion of the labour force in self-employment and that, despite the plethora of efforts to increase the viability of the micro-enterprises operated by self-employed women and men in Sub-Saharan Africa, it is unlikely that the region will prove to be an exception. The poorest Africans are unlikely to escape from poverty unless more vigorous demand is created for the types of *wage* labour that they can supply. A brief discussion of the appropriate demand-expanding policies is provided in Section 6.3 below. In addition, it will be argued that there is an urgent need to devote training resources to increasing the capacity of the most vulnerable members of the wage labour force to organise and to acquire the literacy and numeracy necessary to defend their interests against the least scrupulous and brutal employers (Section 6.4 below).

For the historical and comparative evidence suggests that an increasingly organised wage labour force might develop the capacity to negotiate with employers in larger–scale enterprises not only to implement health and safety regulations more effectively, but also to improve workplace training that directly improves labour productivity. In SSA at present, few employers provide well-designed training. For example, a recent survey of 177 firms in Mozambique found that less than one fifth had certified in-firm training programmes. About 70 percent of firms relied on informal workplace based training, commonly the “sitting with Nellie” model, whereby a new worker is placed alongside a more experienced colleague, in order to gain practical exposure and “training” in the range of tasks to be performed (Webster et al, 2004: 16). Efforts in the 1990s to promote partnerships between governments and employers to improve

[35] Similar assumptions are common concerning the employment status of prime aged women in rural Sub-Saharan Africa, with equally little justification (Sender, 2003).

vocational training have not been very successful (Atchoarena and Delluc, 2001:18; Johanson and Adams, 2004: 26; Standing et al, 1996).

4.5 Summary and Conclusions

The capacity to educate and to improve the health and skills of the next generation of African labour supply, particularly targeting the poorest sources of this labour supply, must be a central focus of labour market policy. This section has shown how difficult it is to define policy priorities in individual countries appropriately given the shortcomings of data, for example, on schooling. A key constraint on prospects for raising the quality of labour supplies in Sub-Saharan Africa remains the HIV/AIDS epidemic. However, here too the empirical gaps frustrate the design of effective policy: despite some evidence of differential sero-prevalence rates across skill groups in the labour force, there is really extremely little reliable evidence to provide a basis for understanding, and responding to, relations between HIV/AIDS infection and socio-economic variables.

The same empirical uncertainty clouds the assessment of the impact of HIV/AIDS on the capacity of the teaching profession to provide the basic literacy and numeracy that potential employers seek in employees. There are conflicting estimates of this impact, and of recent trends in teacher morbidity and mortality. The achievement of universal primary education in Uganda and a pronounced pro-poor shift in the benefit incidence of public spending on education in Malawi show, however, that HIV/AIDS need not be an entirely crippling constraint on educational prospects. Beyond HIV/AIDS, teaching capacity depends on the scale of teacher training. And in some countries – e.g. Tanzania, Mozambique, Malawi, and Ethiopia – tertiary enrolment is especially low, which restricts the pool of potential teachers. Nonetheless, some evidence of quite rapid recent increases in tertiary education enrolments suggests that policies may be effective in accelerating the build up of teaching capacity. Schooling, particularly in poor rural areas, is weakened by high staff turnover and high pupil: teacher ratios, thanks to incentive structures. These too should be susceptible to policy reform – e.g. of salaries and promotion structures. Raising the quality of future labour supplies will also depend heavily on policies that strengthen demand for schooling, again especially in poor rural areas. These policies should include cash transfers to mothers conditional on their children's school attendance, as well as accelerating the eradication of user fees and the abolition of uniforms in primary education.

Similarly, it is important to increase the density of health workers in the population and to improve the provision of health facilities in disadvantaged areas. In the light of evidence of the positive effect of the number of physicians, nurses and midwives per population on mortality rates, the number of health professionals in Sub-Saharan Africa is very low. The health worker density varies between African countries and donors need to help to address this in countries where the density is particularly low, as in Ethiopia, Uganda, Malawi and Mozambique. Furthermore, health workers throughout the region remain excessively concentrated in urban areas and in curative facilities. Since the disease burden in Sub-Saharan Africa is composed principally of communicable diseases that can be dealt with by community nurses, given the cost of a bias in training towards degree level and registered nurses, and given the high levels of emigration of health professionals from Sub-Saharan African countries, this paper

strongly recommends a dramatic shift in donor and government health spending towards brief training and effective support systems for community nurses and other auxiliary workers who can address basic health concerns in rural areas.

The evidence reviewed in this section suggests that building up basic education and health delivery systems and adjusting incentives and spending to ensure these systems more effectively reach into poor rural and predominantly rural areas are higher priorities than pursuing further experiments in technical and vocational education and training (TVET) schemes. This conclusion is reinforced by the finding of a number of studies that such training schemes and institutions have generally failed to orient their activities to the poor and especially to poor women. Such studies also show that there is little evidence that TVET succeeds in improving the necessary skills for successful entrepreneurship or basic survival in informal sectors. There would seem to be a greater need, before prioritising pre-entry and in-service training schemes, to develop more detailed research on the specific labour market characteristics of disadvantaged youth. There is also a case for allocating resources to improving the capacity of the more vulnerable members of the wage labour force to negotiate with employers, with a view, for example, to securing better workplace training.

5. Characteristics and Determinants of Labour Mobility: Opportunities for Poverty Reduction

5.1 Introduction

One estimate of the total number of international migrants, including refugees, suggests that Sub-Saharan Africa contains almost 50 percent of global international migrants, despite containing only 10 percent of the world population (Russell et al, cited in Baker, 1995). Analysis of patterns of mobility in Africa suggests a few stylised facts. First, the scale of circulation of people within and between African countries as well as between Africa and the rest of the world is massive. Second, the scale of circulation is extremely uneven. Third, population movements can fluctuate quite suddenly – a recent example is the surge in migration within and from Darfur in Sudan. Fourth, patterns in mobility change over time. This involves both shifting spatial patterns of mobility and changes in the characteristics of movement: who is moving (e.g. gender composition), where from, where to, what for, and how. Fifth, there is a very poor level of knowledge about the quantitative dimensions of overall labour force circulation in Africa. Sixth, the labour market implications of this population circulation are especially poorly understood.

There is a tension between this immense circulation of people and the abject provision of transport infrastructure (see below, 5.7). This means that the conditions and costs of mobility can be very high and that mobility is often undertaken only in extreme stress. It also means that despite the remarkable mobility of Africans, there are gaps in the links between people and productive opportunities in many parts of the continent. Another implication is that huge mobility is combined with excess stability. For example, collective violence can both project people into accelerated or unwanted mobility and it can also reinforce stability and isolation in areas with low productive potential such as South Africa's 'Bantustans' during apartheid, or drought prone and semi-arid areas of Ethiopia.

Violence is one mechanism regulating this tension between mobility and weak infrastructure, information and communication. However, large-scale political violence is not the only factor. Coercive mechanisms that lie behind much 'trafficking' are important links between population mobility and labour force participation. There are also other long established as well as more recent patterns of coerced and so-called voluntary migration, motivated and mediated by various factors including witchcraft allegations, divorce, infrastructural links, information networks and semi-institutionalised practices of *corvée* labour (Jeeves and Crush, 1997; Van Onselen, 1976). Economic theory, in the tradition of Harriss-Todaro models of individuals making rational "choices" about migration destinations, has not proved very effective in analysing empirical migration data in Sub-Saharan Africa.

The other main mechanism regulating population flows is social differentiation. Those with access to information or skills, or the resources to fund migration (transport costs, intermediaries' fees, etc) are those who are most successful in migration over greater distances. Demographic mobility is highly uneven across Sub-Saharan Africa and the factors affecting this mobility vary greatly. The rates of movement are varied over time and across countries and regions. For example, forced removals to clear "Black Spots" in South Africa in the 1960s, "Villagisation" in Tanzania in the 1970s, "Resettlement" in Ethiopia in the 1980s and "Ivoirité" in the 1990s all had different consequences in different regions of the countries concerned. The age and gender composition of population mobility also vary. And the quality of the labour force that is highly mobile also varies.

5.2 Migration, Emigration and Immigration: Cross-Country Comparative Data

There is very little information on the scale of flows of migrants from Africa to the rest of the world, though the UN *International Migration Report 2002* estimates a net increase in the number of migrants from Africa to the developed countries during the 1990s. Statistical analysis of international migration, from Africa to the rest of the world and possibly even more acutely within Africa, is fraught with data collection problems: censuses are scarce and often outdated; there is a lack of identity documents; false declarations of nationality are rife; etc.

For illustrative purposes, data on recorded inflows and asylum applications to OECD countries like the UK help to identify trends.[36] Two African countries, Somalia and Zimbabwe, feature among the sources of the largest numbers of asylum applications. UK evidence also shows that the largest *increases* in asylum applications in 2001, compared to the previous year, were all, with the exception of Afghanistan, from Africa (Table 16). Thus, in 2001 compared to 2000, there was a 107 percent increase in applicants from Zimbabwe, a 47 percent increase from Ethiopia, and and a 46 percent increase from Sierra Leone.

[36] There are, of course, other examples of international migration of Africans. These often have highly particular characteristics. For example, it was estimated that in 1990 there were some 190,000 Sudanese working in Iraq and a further 12,000 in Kuwait (Van Hear, 1992).

Table 16: New asylum applications to the UK

	2000	2001
Afghanistan	5,555	9,190
Iraq	7,475	6,805
Somalia	6,020	6,500
Sri Lanka	6,395	5,545
Turkey	3,990	3,740
Zimbabwe	1,010	2,085
Total incl. others	80,315	71,700

Source: UK Refugee Council, *Asylum Statistics 2001*.

The inflow of Africans to the UK has been very uneven, in terms of country of origin. Thus, in 2001, just four countries (Somalia, Nigeria, South Africa, and Ghana) accounted for 20,525 out of a total 28,515 people from Sub-Saharan Africa entering the UK in that year (Table 17).

Table 17: Inflow of foreign population to the UK by country of nationality

	1991	1995	2001
Ethiopia	70	170	455
Ghana	1,480	1,820	2,440
Kenya	480	530	990
Nigeria	2,870	3,260	5,040
Somalia	510	760	8,290
Uganda	110	440	740
Tanzania	260	250	280
Sierra Leone	290	440	875
South Africa	1,050	1,300	4,755
Zambia	170	190	354
Sub-Saharan Africa total	7,870	10,560	28,515
All countries total	53,900	55,480	106,820

Source: UK Home Office Statistical Bulletin, Asylum Statistics UK 2003.

Labour movements from Africa have expanded to non-traditional destinations within Europe, especially countries in Southern Europe, which have become net importers of labour over the last two decades. Spain, Portugal and Italy have received increasing numbers of migrants from different parts of the developing world and notably from Africa. In Italy, the number of legal workers from Senegal increased by 62 percent between 1995 and 1999, reaching 32,000. In Spain, Moroccans, a traditionally important migrant community (350,000 as of June 2004)[37], remain the largest group of non EU residents, but other SSA countries, like Senegal (17,300), Gambia (12,000) and Nigeria (10,000) now account for a growing and significant proportion of non-EU residents, in spite of the formidable barriers facing SSA migrants to Europe.[38]

[37] Moroccans accounted for 77 percent of all African migrants in Spain. Almost 50 percent of SSA migrants to Spain came from Senegal, Gambia and Nigeria.
[38] Data from the Migration Secretariat in the Ministry of Social Affairs, Spain, accessed on 25/10/04 at http://dgei.mir.es/es/general/tabla4_jun04.html

Patchy evidence of illegal flows suggests that the actual number of African entrants into Southern European labour markets is far greater. Even incomplete statistics show a massive increase in the number of boat people (crossing the sea towards Spain's mainland or the Canaries) from 3,569 in 1999 to 14,893 in 2000, and the numbers keep growing (Castles and Miller 2003: 84). The significance of demand-driven flows to the underground economies of Italy, Portugal and Spain partly explains this flux of illegal entrants.

Empirical estimates of migration *between* African countries are extremely sketchy. Data published by the Migration Policy Institute (MPI) suggest there were as many as 2.34 million international migrants in Cote d'Ivoire in 2000, and 1.3 million in South Africa. However, estimates of the number of unrecorded migrants in South Africa vary from less than 2 million to as many as 8 million.[39] As a percentage of the total population international migrants ranged from 15.6 percent in Cote d'Ivoire in 1990 to 1 percent in 2000 in Ethiopia (Table 18).

Table 18: Population and migration characteristics of Africa: 1990 and 2000

		Estimated number of international migrants at mid-year, both sexes (thousands)		International migrants as percentage of the total population	
	Mid-year population				
Country	**2000**	**1990**	**2000**	**1990**	**2000**
AFRICA	795,671	16,221	16,277	2.6	2.0
Côte d'Ivoire	15,827	1,953	2,336	15.6	14.8
Ethiopia	65,590	1,153	660	2.4	1.0
Ghana	19,593	507	614	3.3	3.1
Kenya	30,549	146	327	0.6	1.1
Lesotho	1,785	7	6	0.5	0.3
Malawi	11,370	1,157	280	12.2	2.5
Mauritania	2,645	94	63	4.6	2.4
Mozambique	17,861	122	366	0.9	2.1
Senegal	9,393	293	284	4.0	3.0
South Africa	44,000	1,225	1,303	3.3	3.0
Swaziland	1,044	73	42	8.6	4.0
Tanzania	34,837	574	893	2.2	2.6
Uganda	23,487	550	529	3.2	2.3
Zambia	10,419	323	377	3.9	3.6

-- Figure is zero or rounds to 0.0.

Source: Population Division, Department of Economic and Social Affairs, United Nations (2004) Trends in Total Migrant Stock: The 2003 Revision. United Nations: New York, 2004. More data are available at: www.un.org/esa/population/publications/migstock/2003TrendsMigstock.pdf.

[39] On the unreliability of the South African data, see Standing et al, 1996: 61.

5.3 International Flows of Skilled Labour

Many of those migrating between states in large countries (like Nigeria), between African countries, and from Africa to Europe and North America are skilled. Many are college educated (Castles and Miller, 2003, 139). According to one estimate 233,000 South Africans emigrated permanently between 1989 and 1997, most of them skilled (University of Cape Town survey, cited in *The Economist*, August 31st, 2000). In recent years this has become especially clear, for example, in the patterns of international migration observed among health sector workers. Some argue that health sector international migration to OECD countries is likely to continue rising, given labour shortages and ageing populations within a number of OECD countries.In some cases – e.g. South Africa and Zimbabwe, the numbers can be high: for example, according to one estimate some 18,000 Zimbabwean nurses work abroad (Mangwende, cited in Bach, 2003). In South Africa, the number of nurses seeking verification of their qualifications prior to applying for overseas employment rose from 511 in 1995 to 2,543 in 2000 (cited in Bach, 2003). According to another estimate cited by Bach, the flow of nurses from South Africa increased eightfold over the decade from 1991, of whom more than half left for the UK (see also Table A5). In Ghana, 60 percent of doctors educated in the 1980s have emigrated (UNDP survey report cited by Johnson, 2000). Overall, SSA faces the paradox of the presence of a large expatriate community of professionals (of the order of 150,000) and the absence of over 300,000 African professionals in OECD countries (IOM, 2000).

Emigrants often remit and sometimes return. There are also reverse flows: thus, Sub-Saharan African countries are significant importers of migrant labour both from other African countries and from beyond. Workers' remittances to Sub-Saharan Africa are small fry by international comparisons: in absolute terms, no Sub-Saharan African country features in the top ten developing country recipients of remittances. However, remittances are important as a percentage of GDP in Africa, though to varying degrees (Table A6). Thus, Lesotho (c.28 percent) and Uganda (c.9 percent) are significantly more dependent on (recorded) remittances than other Sub-Saharan African countries. Nonetheless, the data on this subject are unreliable. For example, another estimate (IOM, 2000) puts the share of remittances in total GDP in Lesotho at 50 percent. For some countries with extensive networks of informal money transfers (e.g. the *hawalas*), those linked into the foreign exchange settlement houses in Dubai, remittances are likely to be highly significant. For example, some estimate that the Somali economy "is now almost entirely remittance driven" (Ballard, 2003). Elsewhere, innovative transfer arrangements, such as the Kara International Exchange in Senegal, have prompted responses from more formalised financial organisations.

At the more micro level, remittances make powerful contributions to prospects for survival. Evidence from West Africa suggests that remittances are allocated to investment in land improvement in some cases, to crucial consumption expenditure in others, and also to pay hired labour in agriculture (IMP, 2003). It has been estimated that the value of remittances lost to Sudan from the repatriation of migrant workers in Iraq as a result of the 1991 Gulf War was around $300 million (Van Hear, 1992).

5.4 Refugees, Forced Migrants and Internally Displaced People

At the beginning of 2004 there were an estimated 4,285,100 "asylum seekers, refugees, and others of concern" in Sub-Saharan Africa, including internally displaced people, recently returned refugees and stateless people, as recorded by the UNHCR.

Table 19: Countries as Origin and Destination of Refugees (end 2003)

	Refugees & asylum seekers residing in country	Returned refugees	Refugees elsewhere originating in country[a]
Cote d'Ivoire	77,292	16,600	23,741
Ethiopia	130,284	30	61,190
Ghana	48,034	-	15,701
Kenya	241,535	106	3,088
Lesotho	Na	Na	
Malawi	12,050	-	48
Mauritania	530[b]	-	30,141
Mozambique	9,536	-	129
Senegal	22,991	7	12,052
South Africa	110,643	-	274
Swaziland	1,013	-	19
Tanzania	649,933	7	585
Uganda	231,629	4,412	40,410
Zambia	226,877	5	87

[a] population at start of 2003. [b] Mauritania includes 29,500 people labelled by UNHCR as "other people of concern", in this case mainly people from Western Sahara.

Source: UNHCR (2004b), Tables 1 and 3.

Six of the ten largest refugee flows by origin in 2003 were in Africa: Sudan, Burundi, the DRC, Somalia, Liberia and Angola. Nine of the ten largest refugee arrivals took place in Africa. And two of the largest populations of internally displaced people (IDPs) in 2003 were in Africa, in Liberia (531,600) and Cote d'Ivoire (38,000). Africa hosts around 30 percent of the global refugee population (Table A7). Tanzania hosts the fourth largest refugee population in the world (after Pakistan, Iran and Germany). Meanwhile, seven of the ten biggest voluntary repatriation flows during 2003 were in Africa, including 133,000 returning to Angola. As with the global trend, so in Africa more than half the refugees in Africa are female.

Demographic data for some 70 percent of the 3.6 million refugees in Africa at the end of 2000 suggest that overall 56 percent of refugees were below the age of eighteen. However, this figure varies substantially between refugee populations. More than 60 percent of refugees were children in asylum populations in Angola, Togo, the DRC, and Sudan, while less than 30 percent were children in those groups in Cameroon, Mauritania, Nigeria, and South Africa.

The labour force participation implications of such flows are not always well understood. Nonetheless, it is very clear that dramatic and often violent upheavals in one country frequently pitch people into the labour force in other countries, especially in neighbouring countries and sometimes within the same country. Women, as discussed below, are often forced into providing sexual services to secure their

survival. Children may be drafted into government or rebel armed forces to serve either as combatants or as porters and cooks.

South African labour markets have for a long time taken advantage of a supply of labour from neighbouring countries, through different mechanisms but including refuge from warfare. For example, during the 1980s and early 1990s there were many illegal immigrants from Mozambique, effectively refugees from the war there, who were working as wage labourers on commercial farms, as domestic servants in rural areas, and in the urban mining and manufacturing sectors (Sender, 2003). More recently, political upheaval in Zimbabwe has generated a reversal in historical patterns of labour migration as Zimbabweans cross into Mozambique, many in search of work in new agribusinesses in Manica Province. In Western Tanzania in the 1990s, when there were large populations of refugees, there was a widening of the market (e.g. for bananas) and a larger pool of labour: local farmers often hired refugees to work as farm labourers, paying them in food and/or cash (Whitaker, 1999).

However, it is costly to migrate, even to flee. Labour migration to neighbouring countries can become poorer households' asylum migration, "if the purpose of that migration is thought of as being broadly the security of the whole household, rather than more narrowly as a source of protection for an individual. For the poorest households migration outside the country is rarely an option, since such households cannot afford to send any members abroad" (van Hear, 2004, 12).

5.5 Trafficking

Very little is known about the scale of trafficking in human beings in Africa. There are no reliable estimates of levels of trafficking in Africa or globally; even the definition of the term remains unclear (UNICEF, 2003). What is clear is that actual patterns and their causes defy simple generalisations: patterns and causes vary within Africa, despite a general view that poverty, violence, and power (including gender discrimination) are key influences. There are a number of push factors. However, it is also clear that demand forces pull people – especially women and children – into the labour force through trafficking mechanisms, drawing women and girls into sexual labour markets and pulling women and children into domestic service or into agricultural labour (e.g. on West African cotton and cocoa plantations).

Trafficking of different kinds – some more obviously coercive than others – is a long-established mechanism for releasing labour supply in Africa. In northern Tanzania there is evidence of trafficked youth being sent back to their villages to recruit new children for work in the tanzanite mines. Parents are often implicated in pushing children into trafficking networks. Research in Togo found that it is not uncommon for parents to accept money from traffickers, for distant relatives to pay intermediaries to find work abroad, or for parents to hand over children on the promise of education or paid work (Human Rights Watch, 2003). There is also an overlap between trafficking and refugee flows. For example, there is ongoing research on trafficking of refugees in host countries to mobilise cheap labour (e.g. from Congolese and Rwandan refugee camps inside Tanzania to agricultural plantations in Tanzania).

The patterns are complex. For example, one major set of flows runs from East and Southern African countries southwards towards South Africa, a major destination

country. In West Africa there is a more circular pattern of trafficking flows. Cote d'Ivoire and Nigeria, for example, are clearly major destinations but also countries of origin for flows of people to other countries in the region. Gabon features more sharply as a destination, while other countries like Senegal and Togo are more generally viewed as countries of origin. Beyond this there are important trafficking flows from Africa to Europe and the Middle East.

5.6 Violence and Labour Supply

Populations in Sub-Saharan Africa have experienced high levels of both collective and interpersonal violence. Violence in war and peace has substantial effects on the formation of the labour force: it affects the rate of growth of the labour force and its absolute size, and it affects the quality of labour.

War in general is an "amplifier of disease" (USIP, 2001). Evidence from Uganda shows clearly how spatio-temporal patterns of violent conflict unleash patterns in the spread of HIV infection. HIV incidence in Uganda rose sharply during the war of the 1980s, declined on aggregate during the relative peace in the first half of the 1990s and then rose again, especially in conflict affected areas, in the past few years (Epstein, 2001; Ronaldson, 2000). It is widely accepted that seroprevalence rates are higher than average in military forces – according to some estimates as high as 60 per cent in Angola and the Democratic Republic of Congo.

Women have historically been targets of violence during war – both as victims of 'opportunist violence' and as part of the strategy of conflict. The implications of wartime sexual violence have changed with HIV/AIDS. Carballo and Solby (2001) estimate that some 200,000 women were raped during conflict in Rwanda in the early 1990s. Human Rights Watch (2002) and the International Crisis Group (2003) claim that sexual violence has reached extreme proportions in the conflict in Eastern Congo. If rape leads to HIV infection this affects morbidity and mortality, dependency ratios and conditions within households, with knock-on effects reducing children's access to education.

The effects of violence can include destruction of or damage to health and education facilities (including schools and health posts but also teachers and health workers), weakened access to such services because of insecurity and/or broken transport infrastructure, and dramatic depreciation of skills and capabilities through physical, psychological and relational damage. Accurately estimating such effects is notoriously difficult, for methodological and data availability reasons.

The effects of violence on the supply and quality of labour are complex and poorly understood. There has been a bias in the literature on collective violence and armed conflict towards discussing the consequences of violence for asset wealth, as opposed to the consequences for labour participation. If household assets are lost (Matovu and Stewart, 2001), if markets are fragmented and thinned out, if household members are killed or debilitated as a result of violence, then *a priori* two consequences may follow. First, collective violence may produce a "retreat into subsistence". It is often claimed that this is precisely what happens: as market opportunities and agricultural inputs become scarce, as labour productivity is weakened and households are broken up by violence, rural households are often expected to shrink further into a shell of

survival activities. Or it is suggested that, faced with the prospect of asset losses, "people try to protect their assets by shifting wealth abroad" (Collier, Hoeffler and Pattillo, 2002). However, second, exactly these conditions may be expected to push people into participating in labour markets where otherwise they might have resisted participation. In other words, even subsistence becomes unviable, so out of desperation people join the labour force, including women from households in which males have been killed or disabled or simply recruited into military forces. The desperate conditions of war that push people into labour force participation have a particular effect in that women are "often forced into high-risk sexual behaviour…by trading or selling unprotected sex for goods, services, and cash in order to survive and/or continue their travel" during war and episodes of forced migration (UNAIDS, 2001).

Normal barriers to labour market participation in some ways become even more constraining during war. In wartime roads and railways are often damaged or fall into disrepair and traffic services become scarcer. Many sources of labour demand can also dry up during wartime. Therefore, logically there may be a build up of labour market pressure during wartime. How this is resolved is bound to vary. It is essentially very poorly understood. Almost all work on the economics of war has concentrated on the livelihood and asset costs of violence and has assumed there is a typical retreat into subsistence. The labour market question has barely been asked.

An exception is Wuyts (2003), reviewing research on wartime Mozambique. There the dearth of goods effectively accelerated processes of social differentiation and labour force participation. "Far from retreating into a subsistence economy, therefore, the war and crisis heightened the need for the poorer peasantry to sell their labour to obtain cash to buy food and other rural wage goods". For while war conditions break up some sources of labour demand they also tend to generate other sources of demand. Production and trade of alluvial diamonds in Angola, of coltan in Congo, of timber and gemstones in Liberia and Sierra Leone, and so on, are all central to war finance and war duration: none are possible without a labour force. However, in wartime conditions formal regulation of labour markets hardly exists (Krishnamurti, 2003). Labour conditions are often regressive. Labour market opportunities in wartime might provide desperately needed opportunities for survival but they often involve awful conditions, including those of slavery.[40]

The labour market implications of interpersonal, as opposed to collective, violence are similarly complex. Whether or not a person, especially a girl or woman, participates in labour markets, which segments of labour markets she can join, and the quality of her working life will depend in part on whether she has been subjected to violence, either as part of episodes of collective violence and warfare or as a result of interpersonal violence. There has been increasing empirical attention, in the economic literature, to interpersonal violence, including homicide, violence against children, and violence against and abuse of women and girls, and to the economic implications of this violence.[41] Research has begun to reveal how common interpersonal violence is in many parts of the world as well as trying to trace its direct and indirect costs.

[40] See Luckham et al (2001) and Collinson (ed.) (2003).
[41] There are different definitions of violence: they range from those emphasising more narrowly physical damage and intent to hurt or with lack of consent of the victim to broader definitions that

For example, WHO (2003) reported estimates of the rates of homicide of children under five years old of 2.2 per 100,000 boys and 1.8 per 100,000 girls in high-income countries; 6.1 and 5.1 per 100,000 boys and girls in low- and middle-income countries; and 17.9 and 12.7 per 100,000 boys and girls, respectively, in Africa. An estimated 0.9 youth homicides were committed per 100,000 in high-income countries in 2000, compared with estimates of 17.6 per 100,000 in Africa and 36.4 per 100,000 in Latin America (WHO, 2004, 24).[42]

However, it is also clear that there is less evidence for these low and middle-income countries. Indeed, there is, generally, very little robust and comprehensive data that might enable a clear identification of trends or provide a basis for credible comparisons between countries or between different parts of particular countries.[43]

The evidence to date shows that violence is an important factor – aside, for example, from wage signals – in influencing labour market participation as well as productivity. Women who seek wage employment against the wishes of their husbands are often severely beaten (Sender et al, 2004). Interpersonal violence can damage labour productivity through psychological harm, physical debilitation or deprivation of access to education, training, welfare services and so on. This goes for violence outside and within the workplace itself. Interpersonal violence – especially perhaps its effects on girls – can reduce educational attainment. And the fiscal costs of interpersonal violence, which can be substantial, may have a knock-on effect on the budgetary scope for investing in decent health and education services and transport and communications infrastructure that support the development of the labour force.[44]

Empirical evidence of domestic violence in Sub-Saharan Africa, predominantly against adult and adolescent women, is limited though expanding. Some evidence, for example, emerged from a survey of 5,109 sexually active women of reproductive age in the Rakai district of rural southwest Uganda in 2000/01 (Koenig et al, 2003). Researchers found that 30.4 percent of women in the survey had experienced physical threats or violence from their current male partner. The main "risk factors" associated with patterns of reporting domestic violence were women's education, alcohol

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include psychological threats and abuse and the even broader category of "structural violence", which typically highlights social institutions that repress individuals' scope for choice and fulfilment.

[42] The direct medical costs of gunshot violence were estimated at $10,308 per victim at one hospital in Cape Town, South Africa, while another analysis estimated that these direct costs made up just 13 percent of the total cost of gun violence for victims (WHO, 2004, 26).

[43] Different sources – crime reports, hospital records, household surveys, and so on – are drawn on to compile estimates. Many violent acts are either not reported or – as is common in the case of rape – reported but not recorded by officials.

[44] Pfizer (2001, cited in WHO, 2004) estimated that crime and violence together cost the equivalent of 5 percent of the GNP of industrialised economies and as much as 14 percent of the GNP of low-income countries. Comparative evidence from Central America shows some of the effects of one type of non-war violence, i.e. domestic and largely gendered violence. Some studies suggest, for example, that the health burden of gender-based victimisation of women between the ages of 15 and 44 is comparable with that resulting from other risks such as HIV/AIDS, cancer, tuberculosis, and cardiovascular disease. Domestic violence has inter-generational costs too: the children of abused women often have worse health than others. There may be no consensus on whether or not domestic violence affects women's participation in the labour force in Central America. However, there is plenty of evidence showing that violence reduces women's labour productivity.

consumption in the household, and women's age at first sexual intercourse. Women with secondary schooling had lower risks of violence and women who became sexually active below 15 years old were more likely to have suffered recent violence.

There has been more research on domestic and sexual violence in South Africa than elsewhere in Sub-Saharan Africa. Some of this research focuses on particular settings, e.g. on pervasive – but still poorly quantified – domestic violence against women taking place among permanent and seasonal workers' families living on commercial farms (Fast, 1997; Sunde and Kleinbooi, 1999; Parenzee and Smythe, 2003).

There is also more nationally representative data. The first national female homicide study in South Africa collected data retrospectively on homicides of women aged 14 and above in 1999, from a nationally representative sample of 25 mortuaries (Mathews et al, 2004). Of a sample population total of 3,798 female homicides, 1,349 or just more than 40 percent of those cases for which data could be traced were cases of "intimate femicide": women killed by an intimate partner. The findings suggested that four women are killed every day by an intimate partner and that one in every two women killed by a known perpetrator is killed by an intimate partner.[45]

Another kind of violence that affects the quality of labour supply is violence against girls in schools. Where gender based violence and coercion are the norm, not only does this raise the risk of girls dropping out and experiencing teenage unintended pregnancies, but also it raises the risk of contracting STDs, including HIV/AIDS. Yet violence and abuse of girls in schools is widespread. Precise data are elusive but the evidence has been gradually accumulating (Hallam, 1994). This violence can be perpetrated by teachers and by other students. Afenyadu and Goparaju (2003) report a survey of 400 in-school and out of school adolescents in Dodowa, Ghana in which they found that in-school female adolescents were more susceptible to forced sex, junior secondary school girls being the most susceptible. 67 percent of girls in a survey in schools in Botswana (of 560 students) reported sexual harassment by teachers. Surveys in South Africa and Cameroon, Kenya, Malawi, and Zimbabwe confirm that violence against and abuse of girls in schools is a widespread phenomenon and that there are no government policies to address it (USAID, 2004).

Most of the studies of violence against girls in schools claim that there are deleterious educational effects. For example, researchers in South Africa found that girls reported being unable to concentrate, losing interest in school, and sometimes dropping out, in the aftermath of sexual violence. Other studies confirm these findings (see USAID, 2004; Leach et al, 2003).

There is a range of policy challenges here. First, in many countries in Sub-Saharan Africa there simply is very little formal legislation. However, second, in countries where there are formal laws and procedures designed to restrict and respond to sexual and domestic violence, enforcement is weak (Parenzee and Smythe, 2003).

[45] The South African context also shows the problems of conducting research into sexual violence (Jewkes and Abrahams, 2000). While police records suggest 240 rapes per 100,000 women annually, some community surveys suggest that as many as 2,070 rapes took place per 100,000 women in the 17-48 age group annually. Non-consensual sex within marriages is thought to be extremely common and barely reported at all. This is why some researchers talk of an iceberg of sexual coercion, in which recorded incidents are merely the small, visible tip.

Enforcement is weak for two main reasons. Organisations charged with implementing laws and procedures do not always act with much commitment (Leach et al, 2003: viii). And many women, especially in rural areas, either do not have enough knowledge of the laws or cannot get access to legal protection because of the high cost and poor transport and communications infrastructure. Therefore, reducing the effect of violence as a constraint on labour force formation and on labour supply may be a benefit of public investments that, as this report argues, have other labour supply objectives. Other policy initiatives are also necessary. These include investment in public information campaigns through radio and health posts; incentives to police to improve recording of gender-based violence incidents; and potentially – following initiatives in parts of Latin America – creating women-only police stations.

5.7 Transport and Communications Infrastructure

Increased mobility is an important part of the process of poverty reduction, with both private and social returns. Constraints on mobility restrict the potential labour supply in response to geographical labour demand and deprive people of access to information, remittances, and ideas, which contribute to raising labour productivity. Cross-country econometric studies tend to show a clear positive effect of investment in infrastructure on growth; however, some of the poverty-reducing effects show through more clearly in studies of different regional performance within large developing countries. This is the case in IFPRI analyses of India and China: in both countries the research suggested the need for incremental spending for poverty reduction on rural roads. The IFPRI work also showed that a "particularly important factor in the reduction of poverty in both countries was growth of rural non-farm employment and this in turn was heavily dependent on the availability of infrastructure services" (Willoughby, 2002, 7).

Transport infrastructure helps not just by facilitating labour mobility and labour market participation but also through easing the provision of and access to other services that raise labour market quality. For example, research in Vietnam (Deolalikar, 2001) suggests that the presence of a road in a community brings about sizeable improvements in secondary school enrolment and use of public health facilities in poorer provinces (while making a smaller difference in better off provinces).[46] Other research reinforces the significance of transport infrastructure spending on poor areas but argues that the return to transport investment is raised significantly when it is combined with spending on education, health and other services. An additional argument for integrated policies is that they are required to reduce the danger that facilitating labour mobility will also spread HIV/AIDS, as well as other sexually transmitted diseases. Migration is commonly cited as an important factor contributing to the spread of HIV/AIDS (Pison et al, 1993; Lurie et al, 2003).

There are four broad categories of people for whom increasing transport infrastructure provision and usage means a higher risk of exposure to HIV/AIDS: people employed in building and maintenance of infrastructure; people working for transport service

[46] See also Glewwe et al (2000). Nonetheless, it is remarkable how the questionnaires behind survey data on infrastructure and poverty typically fail to ask detailed questions about labour market implications of infrastructural provision, beyond the issue of labour-intensive infrastructure construction.

providers; those working in the sector as managers; and passengers.[47] For example, road construction in Malawi has been linked to the spread of HIV/AIDS; there have been high seroprevalence rates recorded among bus and truck drivers in Cameroon and Tanzania (and for their female partners); the increase in mobility associated with the onset of peace and the reconstruction of transport infrastructure in Mozambique after 1992 was associated with accelerating seroprevalence rates; the most recent data for Mozambique suggests that prevalence is very much lower in the more remote rural Northern areas that are far from the major trade and transport corridors; and so on.[48]

Africa's transport infrastructure is notoriously limited. Rural road density has been estimated at about 32 m/km^2 in Western Africa and 36 m/km^2 in Eastern and Southern Africa on average (Riverson et al., 1991, p. 4). Even this provision is highly unequal. Three countries in West Africa (Cameroon, Ivory Coast and Nigeria) account for more than half the rural roads, while in Eastern and Southern Africa four countries (Madagascar, Tanzania, Zaire and Zimbabwe) account for more than two-thirds of the rural roads. Another study shows that rural road density varies in West Africa from 17 km/1,000 km^2 in Ghana, to 36 km/1,000km^2 in Cameroon, to 94 km/1,000 km^2 in Cote d'Ivoire (Table 20). Nigeria has about 97 m/km^2 of rural roads, "but an acceptable 'target' density, based on Indian experience in areas with similar population densities to those in Nigeria, would be about 730 m, that is, more than eight times as much as the latter country presently has" (Platteau, 1996). Villages are typically distant from all-weather roads. Even in Zimbabwe, 75 per cent of farms are situated more than 5 km away from an all-weather road (ibid).

Table 20: Rural Road Network in Selected African Countries

	Total (km)	**Density (km/1,000 km^2)**
Cameroon	18,000	36
Cote d'Ivoire	30,224	94
Ghana	4,000	17
Mozambique	6,725	17
Nigeria	67,425	97
Tanzania	20,760	66

Source: NEPAD, Comprehensive Africa Agricultural Development Programme, 2002 (http://www.fao.org/docrep/005)

Moreover, rural roads in much of Africa are of poor quality. Some 10 per cent are paved, compared with about 35 per cent in Asia. During rainy seasons many roads are impassable. According to one study, in Tanzania the percentage of roads in good condition in 1990 was 24 percent, compared to 50 percent in Malawi, 40 percent in Zambia, and 32 percent in Kenya.

[47] World Bank, "Document 3(A): HIV/AIDS and the Transport Sector", in *Considering HIV/AIDS in Development Assistance: A Toolkit*.

[48] On Cameroon and Tanzania see *AIDS Analysis Africa*, Vol.4, No.5 (1994) and Vol.5, No.2 (1995) respectively; on Mozambique see the *Mozambique Human Development Report*, 1998. Fieldwork evidence from Nampula Province (Mozambique) suggests that seroprevalence rates are substantially higher in areas close to stations along the railway line between the port of Nacala and Malawi.

An important implication is that for many people in Africa the costs of mobility are extremely high and the means generally basic. Many rural Africans live in a "walking world" because they are too far from roads and/or because of the lack of transport services. Indeed, rural transport costs are higher than anywhere else in the world. Porter (2002) cites estimates that transport charges for journeys of up to 30 km are as much as two and a half times more expensive in Africa than in Asia. Transporters in Ghana's Central Region, for example, commonly charge double for journeys over bad roads. Living "off road" has critical implications for the quality of the labour force. Access to health care is typically bad: research in Ghana and Uganda suggests, for example, that vaccination programmes may miss off-road settlements (Porter, 2002). Access to markets and traders is poor. And access to credit institutions and rural banks or post offices is extremely limited.

Communications infrastructure as well as transport infrastructure is highly unevenly distributed between African countries (Tables A27 and A28). For example, the distribution of fixed and mobile phone subscribers per 1,000 people varies from 4.76 in Ethiopia and 10.58 in Malawi to 54.98 in Senegal and 352.63 in South Africa. Apart from the need to travel and to communicate, migrant and mobile workers urgently need to have access to financial services. In particular, they need safe and low-cost money transmission and savings facilities, in order to meet their obligations to the children and women who depend on their remittances in rural areas. Private sector financial institutions, such as banks, have not found it profitable to establish widespread rural branch networks in Sub-Saharan Africa. The growth of such private networks usually depends on prior state investments, for example in rural post offices, to establish savings habits and create the market for subsequent private financial sector growth.

The spread of rural post offices, postal collections and savings facilities is uneven across Sub-Saharan Africa. Table 21 shows that there are large differences between countries in the number of post offices that accept financial transactions, ranging from only 60 in Uganda to 485 in Kenya, 327 in Ghana and 241 in Tanzania. The average number of inhabitants served by each post office in Ethiopia is about 116,000, compared to 29,000 in Ghana and 36,000 in Kenya. There has been little research on the potential role that rural post offices could play in facilitating labour market integration, financial flows and savings in rural Africa. In addition, the absence of modern money transmission facilities probably contributes to the prevalence of robberies, banditry and armed gangs of youth threatening the survival prospects of the poor and pensioners in several regions of Africa (Issa, 2004; Cross, 2003: 20).

Table 21: Post Offices Accepting Financial Transactions, 2003

	Number of Post Offices (Permanent and Mobile) Accepting Financial Transactions	Average Number of Inhabitants Served by a Permanent Post Office ('000)	Average Area Covered by a Permanent Post Office ('000 Km^2)
Cote DÍvoire	192	86	1.7
Ethiopia	130	116	1.8
Ghana[a]	327	29	0.3
Kenya	485	36	0.7
Lesotho	47	12	0.2
Malawi	176	37	0.4
Mauritania[b]	61	-	16.8
Mozambique	117	69	2.9
Senegal	137	74	1.4
South Africa	2,137	17	0.5
Swaziland	39	19	0.3
Tanzania	241	88	2.2
Uganda	60	-	0.7
Zambia	180	46	3.2

[a]Data for 2001
[b]Data for 1999
Source: Universal Postal Union, Postal Statistics, 2004: http://www.upu.int

5.8 Summary and Conclusions

The movement of people in Africa and its implications for labour supply are characterised by the same unevenness, between and within countries, that other sections of this paper have shown to be a feature of all labour supply trends in the region. The evidence reviewed above suggests two significant themes. First, two of the most important mechanisms regulating flows of people are coercion and social differentiation. The majority of Africans who migrate voluntarily are able to do so because they have advantages compared to others: advantages in wealth, knowledge, status and contacts. Second, there is a tension between this high labour force mobility and the conditions of transport infrastructure, financial market infrastructure, and communications. The extreme unevenness as well as generally poor provision of infrastructure throughout much of sub-Saharan Africa reinforces the significance of the two mechanisms mentioned above – coercion and socio-economic differentiation – in shaping patterns of mobility and labour market participation. Further, the condition of the infrastructure, especially in rural areas, raises the costs for those left behind of education, health care, access to savings institutions, and access to opportunities for migration.

There are many pressures on political leaders to design and impose further intentional barriers to mobility. These are commonly driven by ideological anxieties about population movements, fears for the effects on sending communities of out migration or brain drain, and fears of people in ‘host’ populations about a rising tide of migrants

unfairly competing with local workers. On both efficiency and equity grounds, there should ideally be no barriers designed to restrict population movement within Sub-Saharan Africa or from Africa to the rest of the world. Administrative impediments to mobility are frequently expensive to run and invariably ineffective. Given that those with the wherewithal generally succeed in migrating across borders and internationally, adding legal barriers to those that already exist is only likely to reinforce the inequalities in the labour force and to deepen poverty.[49] Further, these policies effectively criminalise migration and, therefore, drive people into the unregulated and exploitative working conditions that are the fate of so many migrant workers. There is an urgent need to develop new policies and new types of temporary immigrant workers programme that more actively promote the interests of migrant workers by more clearly defining, and more effectively enforcing, certain core rights of migrant workers. [50] The policy emphasis, in other words, should shift away from trying to repress the irrepressible to trying to protect the rights of and prospects for African migrants.

The aim of policy should be both to improve communications and transport infrastructure dramatically, and to encourage institutional and policy reforms that recognise and record migrant labourers as a foundation for protecting them from abusive working relationships. The benefits of this policy approach would include: facilitating the circulation of remittance money within families; making more people easier to reach with vaccination programmes, HIV/AIDS testing and prevention campaigns, and other health and education services; and reducing the scope for violent and super-exploitative intermediaries to fill the gap in aiding mobility.

There is a case for new forms of policy intervention to manage particular types of labour flows, however. As discussed above, there has been a rise in the number of health sector professionals migrating from African countries – to other African countries and further afield. The policy options for tackling this situation include: greater sharing of information on vacancies between countries; public sector involvement in labour migration schemes for public sector service professionals; and greater expenditure on salaries and to improve the working conditions of nurses and doctors in countries like Ghana and Zimbabwe from which there has been substantial leakage in recent years. In OECD countries, most of which fall short of published targets for ODA as a share of GDP and in many of which there are political complaints about the public cost of care for refugees and immigrants, there should be greater education on the role of nurses and doctors from Africa, given that African countries are effectively subsidising health service provisions (public and private) in the OECD countries. One estimate is that the scale of these subsidies is of the order of $500 million per annum (Joint Learning Initiative, 2004: 102).

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[49] This argument is supported by Hatton and Williamson (2002). On the basis of projections from historical evidence of mass migration from poor Europe in the late nineteenth century to future mass emigration flows from Africa, they argue that the magnitudes of African migration to Europe are likely to rise considerably over the next few decades. They argue that some efforts to restrict migration and to seal porous borders might be partially successful but that they will create unpleasant side effects. "European restrictions will create a greater share of illegals and thus greater absorption problems in recipient nations: European restrictions will create more poverty in African sending regions. And European restrictions will create considerable diplomatic problems between the two regions".

[50] The practical and ethical arguments underpinning the design of such programmes have been examined by Chang and Ruhs (2004).

6. Conclusions: Some Implications of a New Policy Focus on the Poorest, Most Disadvantaged Labour Force Entrants

6.1 National Data Gaps

Data on labour supply and employment are difficult to obtain and are less reliable than many other socio-economic indicators. Gaps in the data are evident in the most basic official tabulations.[51] The donor agencies do not appear to recognize the severity of these problems, since they have not prioritised policies to improve the data on African labour markets. This paper argues that there is a need for more and better pro-poor survey and statistical work on African labour markets.

High labour participation rates and low levels of "formal" sector recorded employment are a remarkable feature of the published data on Sub-Saharan African labour markets. The typical national household survey shows that agriculture accounts for 60-80 percent of the labour force; most adult household members are classified as either 'independent', 'own account' agricultural producers or 'unpaid family workers'. These three categories usually account for about 80 percent of the agricultural labour force. However, these categories are 'residual', in the sense that enumerators assume, without detailed investigation of patterns of activity over time, that most people are own-account or family workers in rural areas. It follows that, if these own account occupations are taken as given and if few young people are in schools or colleges, then labour market participation rates are high by definition.

The concepts and interpretations of 'employment' and 'unemployment' are deeply ambiguous. Depending on how questions are worded and interpreted by survey respondents and enumerators, one or another dimension of unemployment will take precedence, thus making international and even intra-national comparisons misleading. Given the definitions in use, it is obvious that unemployment rates in many Sub-Saharan African countries will be *low* by international standards, because of the very low levels of unemployment recorded in rural areas where, as argued above, most people are simply assumed to be engaged in some type of activity. If some studies suggest that unemployment is high, especially among certain groups like the urban youth, their results may be explained mainly by differences in sampling, in definitions used, and in the way conventions of data collection are applied.[52]

In sum, the insufficient coverage and differences in definitions, years, and sources of data may lead to spurious and misleading comparisons between African countries. Moreover, the concepts and definitions used (employed, economically active population, unemployed) may be inappropriate, since their meaning depends on the

[51]For example, the ILO's *Global Employment Trends 2003* presents labour market indicators for 19 African countries, but data for employment growth covering the period 1995-99 are only given for three of these countries, while data for the whole period 1990-99 are available for four countries. Unemployment rates are given for 14 countries in 1999, but only for two countries in 1990. Nevertheless, labour force *growth* estimates are presented for all 19 countries, simply as estimated projections from general population data, available from censuses (ILO 2004e, pp. 138-45).

[52]In spite of efforts to standardise definitions, these still vary between countries; small variations, e.g. in terms of the minimum age accepted for employment questions (as shown in Table A13), can have a significant impact on the comparability of data across countries. Most researchers working with cross-country datasets are unaware of or indifferent to this problem (Behrman and Rosenzweig, 1994).

level of development and the specific features of labour markets. Unfortunately, the poorest Africans participate in precisely those labour markets that cannot be understood on the basis of official statistics.

6.2 Microeconomic Research on Unregistered/Unrecorded Wage Labour and the Need for New Modules for LSMS

Many recent household sample surveys show tiny proportions of people in wage employed categories. Their samples include very few agricultural workers, domestic servants, cleaners, porters, bus drivers and touts, migrant workers engaged in road construction, bar tenders, workers on food stalls or in restaurants, petty salesmen (employed by traders), etc. However, these wage workers, as well as women working for wages in the sexual services sector, are very numerous in the rural and urban areas of Sub-Saharan African countries. The quantitative importance of the waged work of domestic servants has been obscured by the tendency to record non-kin-related residents in households as "unpaid family workers", when it would be more appropriate to classify them as domestic servants, receiving irregular and small amounts of pocket money, food and lodging as their wage.

Many, but not all, of these statistically invisible wage workers belong to the poorest quintile of rural households; a more disaggregated classification of the different types of irregular wage employment would identify those segments of the unenumerated rural labour market that contain the largest numbers of very poor people. For example, there is micro-survey evidence that suggests that the poorest rural households in the Ivory Coast and Kenya are far more dependent on unskilled farm wage income than the richest households and, in Rwanda, dependence on unskilled wage labour is higher in female headed and illiterate households (Barrett et al, 2001: 12, 26).[53]

The ILO has stressed the lack of reliable statistics on waged agricultural labour and highlights the need for "comprehensive disaggregated statistics", since wage employment in agriculture in poor countries is "invisible" in most conventional databases (ILO, 2003: 42). Other empirical studies have highlighted the neglect of rural *non-farm* employment in national datasets (Elbers et al, 2003; Bryceson 1999), as well as the fact that casual labour markets are dynamic in rural areas and that non-agricultural employment in rural areas of Sub-Saharan Africa is significant and growing (Reardon 1997; Kevane 1994; Sender 2003; Wiggins 2000; Adams, 1991). Limited evidence from African micro-surveys (Sender, 2002; Sender et al, 2004), as well as strong evidence from India, suggests that the move from *casual* forms of rural wage employment to more *regular* rural wage employment, implying higher annual real wages, is decisive in reducing poverty (Ghose, 2004: 5112). Thus, a key indicator of poverty reduction, largely ignored in official statistical publications, is the rate of growth of real wages in rural areas. The wage rate for (female) casual agricultural labour is usually the lowest real wage rate in the economy. Monitoring changes in these real wages is particularly relevant for assessing trends in standards of living in the poorest households.

[53] More than 60 percent of rural households in the Ivory Coast and Kenya (and more than 44 percent of Rwandan households) earn income from off-farm agricultural wage labour, usually seasonal, casual labour (ibid).

The results of random household surveys, such as the LSMS, are usually presented as the most accurate and complete information concerning the characteristics of poor people, including their employment patterns. However, LSMS sampling techniques and their questionnaires do not take full account of the degree of heterogeneity within rural areas. The problem is that, in African contexts, the distribution of all rural resources and opportunities, including access to different types of employment, is extremely uneven (Kevane 1994; Reardon 1997; Bryceson 1999; Sender 2003). Thus, important 'pockets' of various forms of wage employment, which are by no means uniformly distributed throughout the country, may easily be missed in random surveys. Also, significant movements of labour to and from some dynamic 'pockets' may not be captured because LSMS sampling frames are inaccurate , or because standard definitions of "the household" and its "residents" are too narrow, leading to a failure to collect information from "non-residents" concerning migration episodes in search of wage employment.

The risk of failing to include large numbers of disadvantaged labour force entrants in the sample provides a rationale for complementary sampling approaches, purposively designed to capture the characteristics of specific groups of wage workers, especially those engaged in seasonal, casual and low-paid jobs outside major urban centres. These are people not usually "resident" in "households". They live and work for long periods in hostels, barracks, construction sites and illegal squatter settlements, or they have been given some space to sleep at their workplace during the harvest season, or while working as domestic servants. These types of employees are easily missed in conventional samples such as LSMS or DHS, because of their focus on a random, population-census-weighted selection of rural and urban enumeration areas and their choice of "household residents" as the unit of analysis.

There are other problems in the way recent household surveys have been conducted that have resulted in insufficiently detailed labour market information covering specific occupational categories. To overcome these problems, more appropriate, disaggregated and context-specific occupational and status categories are required, in order to understand the complexity of what is often vaguely called 'informal' employment.[54] Ideally, more detailed information could be derived from more comprehensive labour force surveys (LFS) but, as shown in Table A11, these are organized irregularly and with substantial lags. Instead, living standards measurement surveys (LSMS) and Household Budget Surveys have now become the main source of socio-economic data in Sub-Saharan Africa. Unfortunately, these surveys have been driven by the search for extraordinarily detailed consumption data for the calculation of national poverty incidence rates. The result is that other types of policy relevant socio-economic survey that focus on the specificities of rural labour market activity or HIV sero-prevalence, for instance, have been neglected.

The employment sections of LSMS are very brief. They aim to collect very general information for international comparisons. LSMS employment modules ask standard questions concerning employment during a very short reference period (one week). However, in any particular week, a rural person who often works as a casual wage

[54] The definition of the informal sector adopted in 1993 by ILO has significant loopholes and remains vague, leaving room for different interpretations. Estimates of 'informal' employment and activities are often indirect, based on the residual balance technique, which depends on different choices of assumptions. These choices frequently differ between sources (Charmes, 1999).

labourer could be engaged in some form of self-employment. Similarly, a person who is often engaged in non-farming activities could be engaged in farming. This is recognised by the Indian National Sample Survey Organisation, which regularly investigates employment patterns every five years, using a much longer reference period - 365 days. These surveys are richer in content and relevance than the standard labour force surveys or the LSM Surveys conducted in Africa (Ghose, 2004). In a few countries (including Mozambique), there has recently been an effort to include a question that departs from the standard conventions and covers a reference period that extends across the entire agricultural season, e.g. "*Has any member of the household been hired out during the last agricultural season?*" However, there is still a great deal of room to incorporate more detailed questions concerning people's experience of seasonal and irregular employment in an expanded LSMS employment module. In the current LSMS questionnaires, respondents are rarely given the opportunity to describe their full array of occupations or to discuss the details concerning their allocation of labour to different survival strategies.[55]

Merely extending the reference period to capture seasonality does not guarantee the reliability of estimates of economic activity. In an ongoing village-level survey in Mauritania, an implausibly high proportion of respondents answered 'never' to the question "*Have you participated in any kind of remunerated activity over the past 12 months?*" in two of three sampled villages. Subsequent responses to other, open-ended questions concerning their activities made it obvious that most people, including children, had in fact undertaken remunerated activities, but their understanding of the initial question, the meaning they attached to 'remunerated', and the inability of inexperienced interviewers to capture inconsistencies, could have resulted in a very low estimate of the number of people who were economically active and an artificially low estimate of the employment-to-population ratio. Thus, open-ended questions can play an important role in questionnaire design, as can the training and career prospects of enumerators. The problem is that, when implementing the standard modules of large-scale nationally representative surveys, researchers have often found it difficult to include context-specific open-ended questions, or to ensure enumerator quality[56]. LSMS has not managed to avoid the problem of unreliable, or even fabricated data arising from inadequate monitoring and training of enumerators, as is well-documented in the case of its South African surveys (May, 2004: 6). However, it will be difficult to ensure enumerator quality and, at the same time, insist on downsizing public sector employment.

[55] New instruments have recently been developed in KwaZulu-Natal to overcome the problems evident in South African LSMS data. The preliminary results from the Risk and Vulnerability in Employment Survey and the Socio-economic Study of the Persistence of Poverty and Inequality are extremely promising; they clearly demonstrate the large amount of labour market activity *missed* in LSM surveys (Lund, 2004; Adato et al, 2004: 17). Similarly, the Ministry of Finance in Mozambique has recently completed a large scale survey of rural wage labour in three Provinces, using questionnaire instruments and interviewing techniques specifically designed to improve upon LSMS employment modules (Sender et al: 2004).

[56] For example, in the CWIQ 2000-01 organised in Mozambique, two questions concerning the hiring in and out of seasonal labour were included and it was expected that these questions would uncover valuable new information about rural labour market dynamics and poverty. However, a simple check of the database showed that a high proportion of households claiming to farm *large* areas of land, of the order of 20 hectares and more, also claimed they did *not* hire in any workers. This is not a credible result and illustrates the possibility of serious measurement errors when implementing large-scale surveys, using inadequately trained enumerators.

There is also a tension between prioritising nationally representative consumption surveys and the need for more reliable data on employment issues. Given the weakness in capacity and logistical resources of many African statistical institutions, the donor-sponsored focus on the calculation of "the national poverty line" often comes at the expense of the depth, comprehensiveness and quality of the data relevant for analysing the dynamics of poverty. At least three steps should be taken to enhance the quality of information on labour supply:

1. Conventional surveys that aim at statistical representativeness must make greater efforts to intensify the training and improve the long-term career structure for a professional enumeration staff, to minimise the biases arising from interviewer-respondent interactions;
2. All large-scale surveys should be prepared to depart from international conventions, recognising that household questionnaires have to be adapted to take account of the specific local contexts of labour transactions, as well as the household fluidity and variability that is often emphasised in micro-level research;
3. New types of complementary survey should purposively select samples of *workers*, rather than "households", focusing on those workers that micro-surveys have identified as the most disadvantaged and lowest paid labour market participants.

The results of a new *pro-poor* statistical research agenda could fill important data gaps and lead to a more realistic discussion of the characteristics of labour markets and (self) employment trends, particularly for the most disadvantaged labour force entrants. These results are also required to identify policies that are affecting and could increase the demand for female and poorly educated labour in the agricultural sector, as well as in the services, transport and construction sectors in rural areas.

6.3 Sectoral Policies for Pro-Poor Investment

The main policy recommendations of this paper are complementary and some specific policies serve multiple objectives. This is especially important given the high cost of reaching all areas of a country with investments in social and economic infrastructure. There is an argument for concentrating policies and expenditures in particular areas, to maximise their gains; this in turn may help to generate over time a stronger material basis for a future spread of investment to other areas. Section 5 showed that the population of Sub-Saharan Africa is highly mobile but that this mobility is constrained by financial costs, information barriers and other obstacles (including, in some countries at some times, political barriers to movement). What this means in practice is that the bulk of population movements typically do not involve the poorest Africans. Poorer Africans who do migrate are more likely to move only over short distances unless they are mobilised by violence.

Yet historically and in contemporary Sub-Saharan Africa labour mobility has played an important role in improving people's material existence. For example, wage remittances by Mozambicans working on the farms and mines in South Africa and other neighbouring countries through much of the twentieth century fuelled a process of investment and accumulation within parts of rural Mozambique (Newitt, 1995). In

Ethiopia, seasonal labour migration to coffee growing areas played a significant role in the survival strategies of poor rural northerners from the 1930s onwards, as did migration to urban and farming employment opportunities in neighbouring Eritrea and Sudan (McCann, 1987, 192), till political restrictions on population mobility were imposed during the 1970s and 1980s. Seasonal labour migration within Ethiopia began to revive in the early twenty first century (CDPR, 2004). Thus, a key to the poverty reducing potential of rural-rural labour migration by extremely poor labour market participants, both in the past and more recently, has been the necessarily uneven pattern of dynamism in commercial agriculture.

Policies that increase the demand for unskilled wage labour on plantations, in agribusiness and on dynamic medium-scale farms, combined with policies to reduce the costs of migration from areas of concentrated poverty to areas with greater economic prospects, may therefore have significant poverty reducing potential. At the heart of these policies must be greater efforts to concentrate labour-intensive infrastructure investments, focusing on areas where agro-climatic conditions are most favourable for economic expansion (and, above all, expansion of export volumes). This policy has the benefit of rationalising expenditures in a context of generally high per capita costs for infrastructure investment in Africa.

The poverty reducing impact of concentrating infrastructure investments on areas with strong agro-export potential can be maximised by (re)designing fiscal and other incentives to encourage production of those crops that demand relatively high levels of wage labour inputs. Labour-intensive crops (and female wage labour intensive crops) are often precisely those for which there is an export market. Thus, data from Computerised Enterprise Budgets (COMBUD) in South Africa, for example, suggest that irrigated crops require at least five times more labour on average than non-irrigated crops and that crops such as papaya, guava, avocados, tobacco and chillies use between 4,000 and 10,000 hours of labour per hectare, compared to dryland maize, oats, ryegrass and wheat, which according to COMBUD require less than 15 hours per hectare in many areas (Standing et al, 1996, 263).

There are obvious complementarities between this policy focus and other priorities, such as the need to manage balance of payments constraints. There are other complementarities too. Improvements in transport infrastructure reduce the costs both of providing and also of getting access to social infrastructure, including health and education facilities and services. In selected rural areas it may then prove relatively cheap to maintain and equip primary schools and easier to recruit and retain teachers; it will also be easier to provide rural women with antenatal care, treat STDs and provide condoms, to promote public campaigns to reduce violence against girls in schools, to enforce laws against domestic violence and to experiment with women-only police posts. If these policies – educational, health oriented, export revenue generating, and infrastructural - are conceived as integrated priorities, it may then become possible to use improvements in transport infrastructure as a means of slowing down HIV transmission rather than accelerating it.

Investments to improve rural infrastructure in the very poorest countries in Sub-Saharan Africa and a focus on dynamic export-oriented agricultural zones, i.e. areas like the coffee and horticulture/floriculture zones of Ethiopia, or the highest potential agricultural areas of Mozambique, would have another important benefit. Such a

focus would make it easier for union officials to generate 'voice' among a critical mass of poor and often female agricultural workers and for donors to encourage government officials to monitor compliance with the international labour standards to which they are signatories.

6.4 Voice and the Bargaining Power of Disadvantaged Labour

The education and health status of the poorest labour market entrants and their children is low in absolute terms, but this paper has stressed *relative* deprivation within each country, particularly the scale of the inequalities between poor workers' access to the services that would increase their productivity and that achieved by more privileged Africans. It was suggested these inequalities might be explained in political economy terms by analysing the balance of political power between different social classes and its influence on policy. The argument was that the bargaining power of the most disadvantaged labour market participants was extremely weak and that pro-poor strategies should make direct attempts to support the political "voice" or bargaining power of the most vulnerable wage workers.

In many parts of the world and in several African countries, trade unions have historically led political struggles for the fundamental rights to which donors have now committed themselves, such as democracy and the universal provision of basic education and healthcare. They are potentially important allies in poverty reduction strategies and in any attempt to improve labour quality, as well as in efforts to promote realistic research on employment and real wage trends. But their potential has yet to be tapped by donor projects and, unfortunately, the donors appear to have missed the opportunity provided by the Poverty Reduction Strategy Paper (PRSP) process to strengthen the role of workers organizations in policy formulation, implementation and monitoring.

A review of trade union participation in the PRSP process in 23 countries, including 10 Sub-Saharan African countries, concluded that, "no union has reported being engaged in the drafting, implementation, or monitoring and evaluation. In a number of cases, unions have attended meetings on the PRSP but have not been able to make responses due to late delivery of background material, lack of capacity to analyze and present alternative proposals or simply because they were invited to only one or two such sessions. They have variously classified such a process as 'cosmetic', 'symbolic' and 'unsatisfactory'"(Egulu, 2004: 10). The same review called for more attention to be paid by donors to capacity building programmes to strengthen unions (ibid: 12).

The need for donors to strengthen their links with the trade union movement and with other organizations that represent workers has also recently been stressed by the UK Secretary of State for International Development. His Department has made the economic case for supporting decent labour standards in poor countries, arguing for the need to raise efficiency by ensuring that women are not excluded from labour market opportunities, as well as for minimum wage legislation and enforcing the obligation to provide decent and safe working conditions, since these standards can reduce wasteful labour turnover and facilitate creativity and cooperation in the workplace. Their arguments also make it clear that too few resources are being allocated to improve the capacity of African governments to strengthen the performance of their health and safety inspectorates. DFID therefore argues that,

"The World Bank could be more active in promoting labour rights…" and has supported the case that the International Finance Corporation should make adherence to core labour standards a condition for their loans (DFID, 2004: 26).

Trade Unions in Sub-Saharan Africa need external support not merely to increase their ability to represent the interests of their existing members, but also to organize, mobilize and educate an extremely large pool of poor and casual workers active in the unenumerated sector. Their existing capacity to reach such unorganized workers, especially in rural areas, is very limited, although unions in some countries have made greater efforts to mobilize new members outside their traditional constituency, as well as women, than others (Konings, 2003; Beckman, 2002). The ILO (2004d, 340)has recognised this problem. It emphasises the institutional and capacity obstacles to the emergence of effective and accountable representative organisations for workers in unenumerated sectors and calls for "voice coalitions" between workers in the informal economy and formal workers and their trade unions. This paper supports the recommendations by the ILO and DFID for substantial new initiatives to promote the organisation of coalitions between wage workers in Sub-Saharan Africa.

Appendix Tables

Table A1: Recent Data Sources for Analysing the Labour Market

Country	**Census** (last and previous)	**LSMS / CWIQ** (last and previous)	**Labour force survey**
Mauritania	2000 1988	2003 2000	
Senegal	2002 1988	2001 1994	1991
Cote d'Ivoire	1998 1988	1985-88	
Ghana	2000 1984	2002 1998	
Ethiopia	1994 1984	2000 1992	1999
Kenya	1999 1989	1997 1994	
Uganda	2002 1991	1997 1992	2003
Tanzania	2002 1988	2000 1993	2000
Zambia	2000 1990	2002 1998	1999
Malawi	1998 1987	2002 1998	
Mozambique	1997 1980	2003 1997	Planned in 2004
South Africa	2001 1996	1999 1995	2000
Lesotho	2001 1996	2002 1995	
Swaziland	1997	1995 1985	

Sources: WB, UN Population Censuses, national statistical offices
Note: LSMS=Living Standards Measurement Surveys; CWIQ=Core Welfare Indicators Questionnaire

Table A2: Population Distribution by Youth and Adult Age Groups and Estimated Labour Force Growth in Selected Regions, (1980, 2000 and 2015)

	Industrialized and Transition Economies				S.E. Asia				Sub-Saharan Africa			
Age Group	**1980**	**2000**	**2015**	**Labour Force Growth 2003-2015**	**1980**	**2000**	**2015**	**Labour Force Growth 2003-2015**	**1980**	**2000**	**2015**	**Labour Force Growth 2003-2015**
15-24 Yrs	**16.6**	**13.7**	**11.6**	**-3.1%**	**20.3**	**19.9**	**15.9**	**3.6%**	**19.0**	**20.2**	**20.3**	**28.2%**
25+ Yrs	**61**	**67.9**	**71.2**	**2.6%**	**39.0**	**47.7**	**53.9**	**25.4%**	**35.4**	**35.5**	**36.1**	**30.8**
Youth Share in Working Age Population	**21.4**	**5.8**	**14.0**		**34.2**	**29.4**	**23.9**		**34.9**	**36.3**	**36.0**	

Table A3: Child labour (Working Children Aged 5 to 14) in Thousands, Using Unweighted Regional Averages

Region	Total	Percent of Cohort
Transition countries	8 310	14.6
Asia	110 390	18.7
Latin America	16 466	17.0
Sub-Saharan Africa	37 902	25.3
North Africa and Middle East	9 027	10.2
Total	182 096	18.5

Source: ILO, 2004, p29, table 3.1

Table A4: Index of Inequality in Grade Four Completion for 15-19 Year Old Boys and Girls, by Household Wealth[1]

Country	Boys	Girls	Gender Gap (Boys minus Girls)
Cote D'Ivoire	0.48	0.67	-0.19
Ethiopia	0.76	0.90	-0.14
Ghana	0.21	0.19	0.02
Kenya	0.03	0.04	-0.01
Malawi	0.28	0.28	…
Mozambique	0.64	0.84	-0.19
Senegal	0.73	0.84	-0.11
South Africa	0.06	0.04	0.02
Tanzania	0.21	0.35	-0.14
Uganda	0.29	0.45	-0.16
Zambia	0.35	0.32	0.03

[1] Educational attainment is measured by the percentage of 15 to 19 year olds in a household that have completed four or more years of schooling, among those who have entered school. The inequality index ranges from 0, representing complete educational equality between the richest 20 percent and the poorest 40 percent of households in a given country and a value of 1, indicating a complete lack of educational opportunities for the poor. A score of 0.5 implies that the poorest 20 percent have reached half of the levels of educational attainment of the rich.

Source: Lloyd and Hewett, 2003: 26

Table A5: Initial admissions to the UK nursing register by country

	1998/99	1999/2000	2000/01	2001/02	2002/03
Philippines	52	1,052	3,396	7,235	5,593
India	30	96	289	994	1,830
South Africa	599	1,460	1,086	2,114	1,368
Australia	1,335	1,209	1,046	1,342	920
Nigeria	179	208	347	432	509
Zimbabwe	52	221	382	473	485
New Zealand	527	461	393	443	282
Ghana	40	74	140	195	251
Kenya	19	29	50	155	152
Zambia	15	40	88	183	133
Malawi	1	15	45	75	57
Botswana	4	-	87	100	39
Total incl.others	3,621	5,945	8,403	15,064	12,730

Note: The decline in figures in 2003 does not indicate a break in the trend but reflects the backlog in processing of registration that accumulated towards the end of the year.

Source: Nursing and Midwifery Council, *Statistical Analysis of the Register*, www.nmc-uk.org

Table A6: Workers' remittances received by country ($bn)

	1995	1999
Lesotho	0.4	0.3
Nigeria	0.8	1.3
Senegal	0.1	0.2
Sudan	0.3	0.7
Sub-Saharan Africa	2.7	3.5
East Asia & Pacific	8.3	10.6
Latin America & Caribbean	12.8	16.9
Middle East & North Africa	8.6	10.5
South Asia	10.0	15.1

Source: World Bank, *Global Development Finance 2003*, World Bank

Table A7: Refugee population by UNHCR Bureau, 2003

UNHCR Bureau	Begin 2003	End 2003	Annual change (%)
Central Africa & Great Lakes	1,301,700	1,257,900	-3.4
East & Horn of Africa	937,600	768,100	-18.1
Southern Africa	321,200	306,200	-4.7
West Africa	528,000	531,200	0.6
Total Africa*	3,088,500	2,663,400	-7.3

* excluding North Africa

Source: UNHCR (2004), *Refugees by Numbers, 2004 Edition*, Geneva: UNHCR

Table A8: Road network and incidence of paved roads, 1970s

	Density of road network (km/km^2)	Percentage of paved roads
Botswana	0.02	9.5
Burkina Faso	0.06	5.1
Congo	0.02	6.5
Ethiopia	0.03	28.0
Kenya	0.09	9.7
Malawi	0.05	12.2
Mali	0.01	11.1
Nigeria	0.11	40.2
Senegal	0.07	23.0
Tanzania	0.02	35.0
Zaire	0.06	1.5
Zambia	0.05	13.0
Bangladesh	0.35	32.0
India	0.41	38.8
Indonesia	0.41	37.2

Source: Platteau, 1996.

Table A9: Infrastructure Provision in Sample Countries

Country Name	1999	2000	2001
Cote d'Ivoire			
Fixed line and mobile phone subscribers (per 1,000 people)	32.8	49.82	62.52
Personal computers (per 1,000 people)	5.51	6.09	7.2
Roads, paved (% of total roads)	9.7	..	..
Ethiopia			
Electric power consumption (kwh per capita)	21.42	22.07	21.83
Fixed line and mobile phone subscribers (per 1,000 people)	3.29	3.93	4.76
Personal computers (per 1,000 people)	0.74	0.95	1.15
Roads, paved (% of total roads)	13.3	12	..
Ghana			
Electric power consumption (kwh per capita)	252.78	320.17	350.14
Fixed line and mobile phone subscribers (per 1,000 people)	11.62	18.17	20.83
Personal computers (per 1,000 people)	2.54	2.97	3.34
Roads, paved (% of total roads)	29.6	..	18.4
Kenya			
Electric power consumption (kwh per capita)	118.03	105.94	116.77
Fixed line and mobile phone subscribers (per 1,000 people)	11.45	14.64	29.6
Personal computers (per 1,000 people)	4.36	4.89	5.59
Roads, paved (% of total roads)	12.1	12.1	..
Lesotho			
Fixed line and mobile phone subscribers (per 1,000 people)	15.94	20.34	36.29
Roads, paved (% of total roads)	18.3	..	..
Malawi			
Fixed line and mobile phone subscribers (per 1,000 people)	6.3	9.1	10.58
Personal computers (per 1,000 people)	0.99	1.16	1.25
Roads, paved (% of total roads)	18.5	..	..
Mauritania			
Fixed line and mobile phone subscribers (per 1,000 people)	6.66	13.45	51.76
Personal computers (per 1,000 people)	8.06	9.81	10.33
Roads, paved (% of total roads)	11.3	..	..
Mozambique			
Electric power consumption (kwh per capita)	59.54	57.26	266.06
Fixed line and mobile phone subscribers (per 1,000 people)	5.46	8	13.71
Personal computers (per 1,000 people)	3.02	3.51	3.96
Roads, paved (% of total roads)	18.7	..	..
Senegal			
Electric power consumption (kwh per capita)	114.46	120.57	129.71
Fixed line and mobile phone subscribers (per 1,000 people)	27.35	47.89	54.98
Personal computers (per 1,000 people)	15.09	16.8	18.36
Roads, paved (% of total roads)	29.3	29.3	..

South Africa			
Electric power consumption (kwh per capita)	3703.68	3643.14	3792.71
Fixed line and mobile phone subscribers (per 1,000 people)	248.08	304.46	352.63
Personal computers (per 1,000 people)	60.39	66.38	69.57
Roads, paved (% of total roads)	20.3	20.3	..
Swaziland			
Fixed line and mobile phone subscribers (per 1,000 people)	46.25	64.68	85.29
Personal computers (per 1,000 people)	..	11.9	15.69
Roads, paved (% of total roads)	..	..	..
Tanzania			
Electric power consumption (kwh per capita)	54.95	56.77	58.49
Fixed line and mobile phone subscribers (per 1,000 people)	6.32	10.84	17.13
Personal computers (per 1,000 people)	2.52	3.06	3.57
Roads, paved (% of total roads)	4.2	..	..
Uganda			
Fixed line and mobile phone subscribers (per 1,000 people)	5.12	10.88	13.94
Personal computers (per 1,000 people)	2.48	2.61	2.94
Roads, paved (% of total roads)	6.7	..	..
Zambia			
Electric power consumption (kwh per capita)	585.67	567.77	584.59
Fixed line and mobile phone subscribers (per 1,000 people)	11.13	17.71	19.55
Personal computers (per 1,000 people)	6.5	6.81	7.09
Roads, paved (% of total roads)	..	62.3	22

Source: World Bank (2004).

Table A10: Radio and television receivers in 1997

Region	Number of radio broadcasting receivers		Number of television receivers	
	Total (millions)	**per 1,000 inhabitants**	**Total (millions)**	**per 1,000 inhabitants**
Developing countries of which:	1 124	245	720	157
Sub-Saharan Africa	**121**	**202**	**29**	**48**
Arab States	71	269	31	119
Latin America and the Caribbean	204	412	101	205
Eastern Asia and Oceania	558	306	461	253
Southern Asia	160	118	73	54
Least developed countries	85	142	14	23
Developed countries	1 308	1 061	675	548

Source: UNESCO (2004).

Table A11: Labour Force Surveys in Sub-Saharan Africa

Country	Year	Survey Name
Angola	1992	Inquerito sobre emprego e desemprego na cidade de Luanda
Ethiopia	1999	National Labour Force Survey 1999
Gabon	1994	Enquête Emploi Chômage
Madagascar	1996	Enquête emploi
Mali	1997	Enquête sur l'Emploi et le Chômage au Mali
Nigeria	1984	Labor Force Survey 1984
Rwanda	1988	Enquête nationale sur l'emploi 1988
Senegal	1991	Enquête emploi, sous emploi, chômage en milieu urbain 1991, région de Dakar
Tanzania	2000	Integrated Labor force survey
Zambia	1999	Child Labor Survey and End of Decade Survey 1999

Source: Africa Poverty Monitoring database, World Bank

Table A 12: Differences in Unemployment Rates by Region

	Unemployment Rate (%)		
	1993	**2002**	**2003**
Eastern Africa	10.3	10.9	11.0
Central Africa	12.8	9.3	9.4
Southern Africa	27.1	30.1	31.6
Western Africa	7.1	6.8	6.7

Source: ILO 2004e, extracted from Table 6.1

Table A13: Differences in ILO Data Sources and Definitions Covering the Economically Active Population

	Age limit	Years (between 1980 and latest)	Main source
Cote d'Ivoire	6+	1988	PC
Ethiopia	10+	1980, 1984, 1988, 1991-95, 1999	OE, PC
Ghana	7+	2000	PC
Kenya	10+	1989	PC
Lesotho	n.a.	n.a.	
Malawi	10-64	1983, 1988, 1998	PC and LFS
Mauritania	6+	1988	PC
Mozambique	12+	1980	PC
Senegal	6+	1983-85, 1988, 1995	OE and PC
South Africa	15+	1980, 1985, 1991, 2003	PC and LFS
Swaziland	12+	1986	PC
Tanzania	10+	2001	LFS
Uganda	n.a.	n.a.	
Zambia	15+	1980, 1981, 1984	OE, PC

Source: LABORSTA, ILO.
Note: PC = Population Census; OE = Official Estimate; LFS = Labour Force Survey.