

**United Nations  
Department of Economic & Social Affairs  
UNDP Regional Bureau for Africa**



## Reading Material 6

# Employment for Poverty Reduction

by

**John Weeks**

**Centre for Development Policy & Research**

**School of Oriental & African Studies**

**University of London**

## Table of Contents

|   | <b>Pages</b> |
|---|--------------|
| <b>2.1 Employment and Poverty</b>                         | <b>1</b>     |
| <b>2.2 Analytical Framework</b>                           | <b>1</b>     |
| 2.2.1 Neoclassical Labour Market Theory                   | 1            |
| 2.2.2 Critique of the Labour Demand Function              | 3            |
| <b>2.3 Data and Definitions</b>                           | <b>10</b>    |
| 2.3.1 Methodology & Definitions                           | 10           |
| 2.3.2 Enumerated Employment in Sub-Saharan Countries      | 15           |
| <b>2.4 Macroeconomics of Employment and Livelihoods</b>   | <b>19</b>    |
| 2.4.1 Demand Constrained Growth in the Sub-Saharan Region | 19           |
| 2.4.2. Investment and Employment Generation               | 23           |
| 2.4.3 Role of Public Investment                           | 27           |
| <b>2.5 Impact of HIV/AIDS on Labour Supply</b>            | <b>28</b>    |
| <b>2.6 Conclusion</b>                                     | <b>31</b>    |

## 2.1 Employment and Poverty

The link between growth and poverty reduction is employment, the direct source of household incomes. Despite the current emphasis on poverty reduction, there is relatively little analytical or empirical discussion of employment. This is shown, for example, in PRS documents, which typically have superficial discussions of employment, earnings and wages.

The purpose of this module is to treat the interaction between employment and poverty reduction, and the links between growth and employment. It does so first by considering the appropriate analytical framework for conceptualising growth, employment and poverty reduction, and then places this framework into the sub-Saharan context. While the vast majority of Africans gain their livelihoods in agriculture, and much of it on small holdings, employment generation is placed analytically within a Neoclassical analysis of labour markets. Central to this approach is the concept of ‘market clearing’. Therefore, this module begins with a critique of the Neoclassical approach to labour markets, even though this approach focuses on employment generation in the context of employers and employees. It is necessary to do so because the strong conclusions that dominate the policy debate derive from this analysis.

After treating the theory of labour markets, the module reviews the data on employment for the region, and relates definitions to labour force characteristics. This lays the basis for a treatment of the macroeconomics of employment creation and poverty reduction, in which public investment plays a key role. Of particular importance are policies which can make investment, both public and private, more employment generating. The final section reviews perhaps the most important factor on the supply side of the labour market affecting poverty and employment, the impact of HIV-AIDS.

## 2.2 Analytical Framework

### 2.2.1 Neoclassical Labour Market Theory

The most important of the Neoclassical labour market conclusions is that for the private sector, the generation of employment is negatively related to the real wage. If this theoretical generalisation is correct, it implies an inherent conflict between employment generation and poverty reduction when wages are below a poverty line. In other words, public interventions to raise the wages of workers below the poverty line are achieved only at the cost of a slower growth of employment. The analysis below will demonstrate that this powerful and generally accepted conclusion derives from a theoretical special case of little relevance to actual economies, in the sub-Saharan or elsewhere.

The Neoclassical approach to growth and employment has been appropriately called ‘trickle-down’: growth of output results from increased use of inputs within the

framework of an aggregate production function, and the clearing of efficient and competitive factor markets dictates the appropriate level of employment and earnings for the new level of output. Labour inputs are treated as analytically equivalent to the capital inputs, and markets are presumed to clear instantaneously.

Neoclassical labour market theory is part of a system of many markets, all of which interact for a general equilibrium solution. At the aggregate level the markets must 'clear' simultaneously for labour, output, money, and external trade. The Neoclassical theory general equilibrium is by definition a full employment equilibrium in which the values of all variables are unique and 'efficient'. There can be no general equilibrium with voluntary unemployment or underemployment in the absence of market 'distortions' (see Module 1). In recent decades the emphasis has been placed almost entirely on 'distortions' arising from government policies rather than the behaviour of the private sector (for example, market power by sellers), so that public sector interventions are considered the barrier to the full employment general equilibrium. In an open economy, the Neoclassical general equilibrium outcome derives from four theoretical components:

1. marginal productivity theory which governs factor markets, from which the level of aggregate output derives;<sup>1</sup>
2. the Heckscher-Ohlin interpretation of comparative advantage,<sup>2</sup> which determines the pattern and direction of trade, and *via* the exchange rate clearing of the external account (ignoring capital flows);
3. Walrasian market clearing,<sup>3</sup> which ensures that the markets of an 'undistorted' economy clear simultaneously and instantaneously at the unique set of efficient prices (no 'false trading', see below); and
4. the quantity theory of money which determines the absolute price level,<sup>4</sup> and, therefore, all nominal values (e.g., the money wage rate).

---

<sup>1</sup> 'The most important principle determining demand for labor is called **Marginal Productivity Theory**. It attempts to relate marginal contribution to the output produced and the rate of wages required to be paid to the marginal worker.' (Emphasis in the original, see <http://www.pinkmonkey.com/studyguides/subjects>).

<sup>2</sup> 'Countries have comparative advantage in those goods for which the required factors of production are abundant. This is because the prices of goods are ultimately determined by the prices of their inputs. Goods that require inputs that are locally abundant will be cheaper to produce than those goods that require inputs that are locally scarce.' (See Wikipedia at [http://en.wikipedia.org/wiki/Heckscher-Ohlin\\_model](http://en.wikipedia.org/wiki/Heckscher-Ohlin_model)).

<sup>3</sup> 'As outlined by Walras, the basics of the model are the following: individuals are endowed with factors and demand produced goods; firms demand factors and produce goods with a fixed coefficients production technology. General equilibrium is defined as a set of factor prices and output prices such that the relevant quantities demanded and supplied in each market are equal to each other, i.e. both output and factor markets clear. Competition ensures that price equal cost of production for every production process in operation.' (See <http://cepa.newschool.edu/het/essays/get/walclass.htm#introduction>).

<sup>4</sup> 'A very influential (some say tautological) notion which asserts that there is a relationship between the quantity of money in an economy and the level of prices (basic monetarist principle)... The theory can be rendered as:  $MV = PT$ , where M = money supply, V = velocity of circulation (how often the same money changes hands), P = price level, and T = volume of transactions in goods and services.' (See [http://www.anz.com/edna/dictionary.asp?action=content&content=quantity\\_theory\\_of\\_money](http://www.anz.com/edna/dictionary.asp?action=content&content=quantity_theory_of_money)).

In the analysis below, the labour market is considered within a closed economy to simplify the discussion, and this does not affect the generality of the conclusions. In addition, most of the discussion ignores the money market. Therefore, the critique of Neoclassical labour market analysis focuses on the importance of Walrasian market clearing and the implications of marginal productivity theory in a multi-product system. At points the discussion will seem unnecessarily abstract and of no obvious practical and policy relevance. Quite the opposite is the case; what appears ‘unrealistic’ proves to be the basis for the extremely powerful policy conclusion presented above.

The Neoclassical labour market analysis is frequently presented by using a partial equilibrium diagram such as Figure II.1, in which the labour force is measured on the horizontal axis and the ‘real wage’ on the vertical, with the latter defined as the money wage divided by the price of output. The demand for labour derives from an aggregate (economy-wide) production function, and the supply of labour is typically assumed to be upward sloping in the relevant range.<sup>5</sup>

### 2.2.2 Critique of the Labour Demand Function

Several points need be made about this diagram which appears in every economics textbook. First, the production function from which the labour demand curve derives presumes that the various outputs of the economy are always produced in the same proportions, which is analytically equivalent to assuming there to be only one output. By definition, on the production side outputs differ according to their capital-labour ratios. Were there more than one product and the relative composition of output changed, then the labour demand function would not be unique at each wage level. Below it shall be shown that the restriction on the aggregate production function is even stronger: the produced input (the capital stock) must be the same as the output. At this point it is sufficient to note that the Neoclassical aggregate demand for labour represents a very special case in which the economy produces only one output, and cannot be generalised beyond one output while keeping the function  $L_d = f(w)$  unique.

Second, the labour demand function assumes that the economy has no demand constraint. Every point on the function represents the maximum output which the associated amount of labour can produce. Therefore, the employer will choose this amount of labour only if it is expected that the associated level of output can be sold. It is for this reason that the function  $L_d = f(w)$  is called the ‘notional demand for labour’, rather than the effective demand. This presumption that the notional demand will always be realised as the effective demand implies that there is only one outcome for the labour market: full employment. On the standard presumption that exchange is determined by the ‘short’ side of the market, the possible outcomes lie on the

---

<sup>5</sup> In its most general form,  $Q = f(K, L)$ . The basic conditions for a Neoclassical production function is that are that it must be multiplicative (no output without a positive amount of every input) and demonstrate diminishing returns to the variable input. These requirements limit the practical possibilities to constant elasticity of substitution functions (of which the best known is the Cobb-Douglas ( $Q = AK^\alpha L^\beta$ ,  $\alpha + \beta = 1$ ) and trans-log functions.

supply curve up to wage level  $w_2$ , and on the demand curve above this wage. All outcomes other than the equilibrium one would imply a level of output below the full employment general equilibrium. As a result, at least one other market would be in disequilibrium, because either the interest rate or the price level would be inconsistent with the clear of the product market and/or the money market. Therefore, the intersection of supply and demand in the single market diagram is a notional equilibrium, and all other points might be called ‘ultra-notional’, in that they could not occur even in a ‘thought experiment’.

The policy implication of this discussion is that a statement such as, ‘unemployment results from wage rigidity’ has no practical meaning because there is no mechanism, even in theory by which an excess supply of labour would be eliminated by the adjustment of the real wage. It is for this reason that the word ‘instantaneous’ is used to describe the process of ‘adjustment’ from disequilibrium to equilibrium.<sup>6</sup> For reasons of political economy so-called wage rigidity may be a problem, but not because it prevents the clearing of the labour market.

There is an equally serious problem with the partial equilibrium diagram of the labour market: the labour demand function cannot be shown to be downward sloping. The downward slope results from the substitution of labour for capital as the real wage falls. Within the theoretical argument this substitution does not occur with the capital equipment being employed at any moment in time. Whether it is possible to use more labour with an existing capital stock is an empirical question about which no general conclusion can be drawn. The Neoclassical production analysis presumes that there exist at any moment many techniques for producing the same output, which are technically efficient and involve different capital-labour ratios. When the real wage falls (rises), employers change, or ‘switch’, to a technique with a lower (higher) capital-labour ratio.

The way this ‘switching’ should occur to generate a downward slope in the labour demand curve is shown in Figure II.2. The real wage is on the vertical axis and the profit rate on the horizontal axis. The lines are based on the following basic distributional equation:

$$y = wl + rk$$

Where  $y$  = value added,  $w$  = real wage rate,  $l$  = level of employment,  $r$  = profit rate, and  $k$  = capital stock.

The relationship, ‘trade-off’, between the profit rate and the wage rate can be written as follows:

$$r = y/k - w[l/k]$$

$$w = y - r[k/l]$$

Figure II.2 shows three techniques for producing the same output, A, B and C, in descending order of the fixed capital-output ratio (which can be inferred from the intercepts). In the right hand quadrant, for a real wage above  $w_2$ , Technique A, with

---

<sup>6</sup> ‘...[O]n the manner in which equilibrium is supposed to come about, neo-classical theory is highly unsatisfactory...’ (Hahn 1984, p. 384).

the highest  $k/l$  is the most profitable. Between  $w_2$  and  $w_1$ , Technique B is most profitable, and below  $w_1$  C becomes most profitable. The left hand quadrant shows the level of employment associated with each technique. Figure II.2 translates into the labour demand function in Figure II.1.

First it can be noted that a long-run relationship, switching technologies, has been interpreted as short-run behaviour. In real economies, firms cannot alter their production technology in a short period of time. Therefore, it is open to question whether Figure II.1 has any relevance to labour markets in the short-term even if instantaneous adjustment were accepted. In real firms, switching technologies has a cost, and no rational firm would change its capital stock in response to a momentary change in wages.

There is a second and more serious problem: in general, the lines representing the trade off between wages and profits are not linear. Consider the case of an economy with an output (the consumption good) and an input (the capital good). The Technique A for this economy can be summarised as follows:

$$pk_{a1} + wl_{a1} + rp_{a1} = 1$$

$$pk_{a2} + wl_{a2} + rp_{a2} = p$$

Where:  $k_{a1}$  and  $k_{a2}$  are the quantities of capital required to produce one unit of the output (good 1) and the input (good 2);

$l_{a1}$  and  $l_{a2}$  are the quantities of labour required to produce one unit of each good;

$r$  is the profit rate on capital, and is assumed to equalise across the two goods;

$w$  is the unit real wage rate, assumed to equalise across the two goods; and

$p$  is the price of the capital good in terms of the consumption good ( $p = p_2/p_1$ ).

The two equations can be solved for the relative price of the capital good,  $p$ , set equal to each other, then the combined equation solved for either the profit rate or the wage rate:

$$r = (1 - w l_{a1}) / (k_{a2} + w[k_{a2}l_{a1} - k_{a1}l_{a2}])$$

This equation is easily interpreted. If  $k_{a2}l_{a1} = k_{a1}l_{a2}$ , then the wage-profit trade-off reduces to  $r = y/k - w[l/k]$ , as above, and is linear as in Figure II.2. This is the case of an economy with only one output. In the general case,  $k_{a2}l_{a1} \neq k_{a1}l_{a2}$ , and the wage-profit trade-off is either convex or concave, as in Figure II.3. If the input has a higher capital-output ratio than the output (is more 'capital intensive'), then the curve will be bowed out with respect to the origin (Technique A) and bowed inwards if the output has the higher  $k/l$  (Technique B), and if all values are positive (as they are by definition), any two trade off curves must intersect twice. Intersecting twice, as in Figure II.3, results in a complete break-down of the concept of factor intensity, and thus the generalisation that lower wages result in more 'labour-intensive techniques'.

This result may appear to be contrary to common sense: both techniques are characterised by fixed physical quantities of capital and labour to produce a unit of output; how then, can one appear 'labour-intensive' for some wage rates and 'capital-intensive' for other wage rates? The explanation lies in the aggregation of the capital

stock. For each product within a technique, the measurement of the capital-labour ratio is straightforward,  $k/l$ . However, the value of the aggregate capital stock is inversely related to its relative price, which changes as  $r$  and  $w$  change.

The implications of the algebra are shown in Figure II.3. For wages above  $w_2$ , Technique B is the more profitable, implying a level of employment of  $LB$ . When the wage drops below  $w_2$ , Technique A becomes the more profitable, and employment rises to  $LB$ . However, when the wage falls below  $w_1$ , Technique B is again more profitable ('re-switching'), and employment declines, back to  $LB$ .

The discussion produces a clear and powerful conclusion: in a multi-product economy (which all real economies are), the aggregate demand for labour in a market economy is not monotonically related to the relative price of labour and capital. Or, to put it less technically, lower wages do not necessarily result in private employers choosing techniques that employ more labour; in response to a fall in wages, they may choose techniques that employ less labour.

### 2.2.3 Conclusions and an Alternative Approach

The conclusions of this critique of Neoclassical labour market analysis relevant for the sub-Saharan can be summarised as follows:

1. the framework for the analysis is an economy in which every economic agent is an employer or wage employee, and the majority of the regional labour force is neither;
2. even for an employer/employee economy, the analysis lacks a mechanism by which the labour market can move from disequilibrium to equilibrium;
3. were one to accept instantaneous market clearing, the demand for labour cannot be shown to be downward sloping in the short run because of the mechanism by which labour is substituted for capital (switching or replacing techniques); and
4. it cannot be shown that in a multi-product economy the demand for labour is negatively related to wage over any time period.

These conclusions do not imply that there is no argument for wage restraint, or that wage levels 'don't matter'. In the public sector, with a budget constraint, there is an obvious trade off between the level of employment and level of wages. In the private formal sector, increased wages can result in a fall in employment if one takes a non-Neoclassical approach to production relations. In Neoclassical theory, all techniques are technically efficient; that is, for some wage and profit ratio each technique is the most profitable. In actual economies, some firms operate with inferior techniques, defined as techniques that use both more labour and more capital for a given output than some other technique. Techniques are rendered inferior by technical change, but firms may continue to use them because of the short-run cost of replacing capital equipment. Typically, such firms remain in operation through a wage subsidy; that is, either willingly or due to lack of alternative employment opportunities, workers accept lower wages than are paid in technically efficient firms. When there is a general increase in wages, some firms using inferior techniques will become loss

making and drop out of the market. Whether the resulting increase in technical efficiency in the economy outweighs the loss of employment it implies is a policy judgement.

However, the critique of Neoclassical labour market analysis does imply that even for the private sector, governments cannot have confidence that market 'signals' will result in the optimal rate of employment generation. This means that the slow growth of wage employment in sub-Saharan countries during the period of so-called import substitution was not necessarily the result of government policy. The 'market failure' predicted by the critique of Neoclassical labour market theory indicates that there is scope for public sector interventions, perhaps as a part of an industrial policy, to foster employment growth.

In summary, the structuralist alternative to Neoclassical theory is to treat the labour market within a demand determined macro framework (see Module 1), in which employment is dictated by the demand for output and the techniques used to produce that output. While wages affect the level of public and private employment, their adjustment in an unregulated market does not result in full employment. Further, achieving more employment intensity for a given level of output, analogously to achieving greater equity in distribution, requires public sector interventions. Thus, raising the employment intensity of growth and increasing the poverty reducing effect of growth are complementary policy objectives.

**Readings:**

Hahn, Frank

1984 *Equilibrium and Macroeconomics*. Oxford: Basil Blackwell

Khan, Mohsin and P.Montiel

1989 'Growth-Oriented Adjustment programs: A Conceptual Framework', *IMF Staff Papers*, Vol. 36 No. 2 pp. 279-306

Taylor, Lance (1991). *Income Distribution, Inflation and Growth: Lectures on Structuralist Macroeconomic Theory*. Cambridge, Mass: The MIT Press.

Weeks, John

1989 *A Critique of Neoclassical Macroeconomics* (London and New York: Macmillan & St Martin's), Chapter 10

1991 'Macroeconomic Adjustment and the Fiction of Labour Market Clearing,' in Guy Standing (ed.), *Towards Social Adjustment*. (Geneva: ILO)

Figure II.1: Partial Equilibrium Presentation of a Labour Market

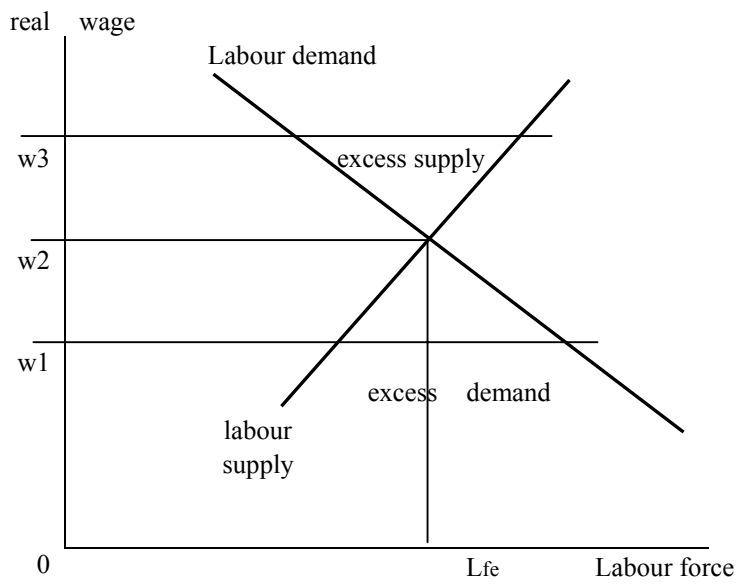
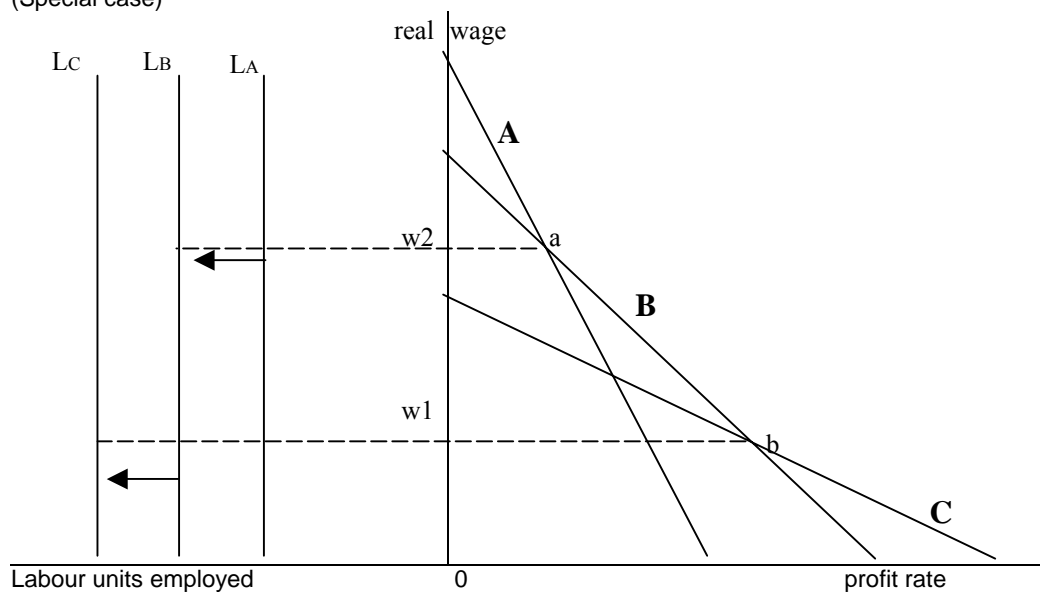
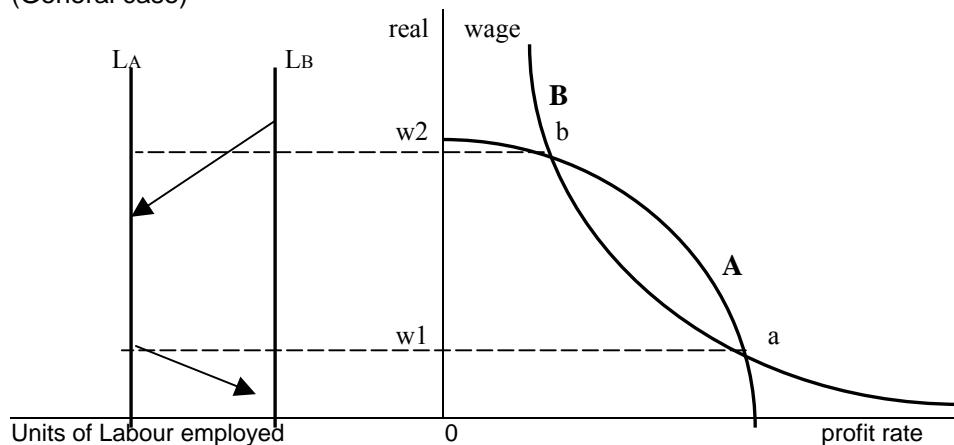


Figure II.2: 'Capital-Labour Substitution' in a One Commodity Economy (Special case)



Notes: The letters A, B and C refer to techniques (thick lines), which have alternative combinations of capital and labour for producing the same level of output. LA is the level of employment associated with Technique A, LB for B and LC for C. As the real wage declines, Technique B becomes most profitable (at point a), and then Technique C (at point b). The arrows in the left hand quadrant highlight the shift in level of employment.

Figure II.3: 'Capital-Labour Substitution' in a Two Commodity Economy (General case)



Notes: Techniques A and B have an input ('capital') and an output. For Technique A the output has a higher capital-labour ratio than its input. For B, the input has a higher K/L than the output. For real wage rates above w1 Technique A is more profitable; for wages w2 down to w1, Technique B is more profitable; and below w1 A is again more profitable. The associated employment levels are LA and LB. As the real wage falls employment first increases, then decreases, and vice-versa.

## 2.3 Data and Definitions

### 2.3.1 Methodology & Definitions

Having considered the inadequacies of the Neoclassical theory of labour markets, the discussion now turns to the institutional and social characteristics of livelihoods in sub-Saharan countries. First, as implied above, there are analytical and practical problems with the definition of unemployment and underemployment in the sub-Saharan context. These problems have important empirical implications that result in a lack of consistent and comparable statistics. Second, there is a need for more appropriate labour categories to be used in surveys in order to capture what is called 'informal' employment. The heterogeneity of the labour force, on both the supply side and the demand side, is not captured by official statistics. Third, the dichotomy between 'formal' or 'modern' and 'informal' labour markets fails to capture the heterogeneity across formal-informal boundaries. Fourth, given the problems with official statistics, one must scrutinise carefully results from micro-surveys and independent research to create an accurate empirical summary of labour force supply and demand.

Especially problematical is the concept of unemployment in the context of most African countries. Typically the definitions of employment and unemployment refer to those above a specified age (often fifteen) who worked for monetary gain a specified number of hours per day during the reference period of the survey, or sought to do so without success (for example, the preceding week).<sup>7</sup> Thus, the internationally accepted definitions incorporate different and separable aspects: 1) a condition, being without employment; 2) a need, income for subsistence needs; 3) an attitude, desire and intention for paid work; 4) a capacity; an availability, able to respond to an opportunity; and, 5) an activity, searching for work (Standing, Sender & Weeks, 1996). In the absence of a stable institutional framework, these are too many dimensions for the employment-unemployment dichotomy to carry. Depending on how questions are worded and interpreted by the respondent, one or another dimension will take precedence, thus making international and even intra-national comparisons misleading.

It is instructive to consider the elements of the standard definition in detail. First, 'being without work' has little meaning in sub-Saharan countries, because there is no clear distinction between work and non-work. In developed countries, the institutional basis of this distinction is the workplace, and by definition work is carried out when one is in it. In sub-Saharan countries much productive activity is carried on within the context of the family, which would be defined as 'non-work' by the standard definition. Second, a considerable amount of work is carried out with no direct monetary payment. This is the case for household labour, and also for various

---

<sup>7</sup> 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.

forms of apprenticeship. Third, in the standard definition of unemployment, the 'willingness to work' is an issue because under certain conditions of qualification, the state provides support for those out of paid employment. In the absence of state support for the unemployed, 'willingness to work' has little meaning. Fourth, the standard definition presumes that all but a few in working age have the physical ability to work. As discussed later, in the sub-Saharan, there are serious constraints on the supply of labour arising from the HIV-ADIS endemic. And fifth, 'searching for work' is a specific activity that involves the monitoring of the unemployed through institutions such as labour exchanges that provide recipients of unemployment support with job opportunities that they must pursue. Finally, the typical minimum age for inclusion in the labour force statistics has little relevance in a region where child labour within and without the family is common.

The problem of definition is compounded because in most countries of the sub-Saharan region information on employment and unemployment comes from under-funded institutions, namely Ministries of Labour. These ministries and their associated institutes typically lack the funding to design and carry out relevant labour force surveys, and these surveys are rarely conducted on a frequent and methodologically consistent basis. Living standards measurement surveys (LSMS), which have become common in Sub-Saharan Africa, supported by donor funding, focus on household consumption estimates for poverty analysis, rather than detailed employment status. The employment sections of LSMS are notoriously small and general, aiming at collecting very general information designed for international comparison, and not offering sufficient data to understand the nature and dynamics of national labour markets. Indeed, the present approach to LSMS represents a missed opportunity. With more context-specific employment data from LSMS, it would be possible to link poverty, equity and employment at both micro and macro levels.

Because of the use of the international standard definition, unemployment rates from household surveys in sub-Saharan countries tend to be extremely low (with the exception of South Africa). The very low rates from household surveys result from the extremely narrow coverage in sub-Saharan countries of unemployment benefits, and the predominantly rural character of the population. In both urban and rural areas, the vast majority of the population must engage in some form of livelihood-generating activity in order for the household to survive. The main problem is poverty, and seasonal periods of inactivity. Thus, unemployment rates, as to the extent they are useful, provide an imperfect guide to the employment situation in areas characterised by a high proportion of formal sector employment.

A group vulnerable to unemployment by the standard definition is youth, especially in urban areas. It is frequently alleged that this unemployment is the result of a combination of inappropriate qualifications and unrealistic expectations. Whether or not this is true, the failure of educated youth to find employment that uses their skills is a serious under-utilisation of national resources. Unemployment data for rural areas, where the bulk of the poor are concentrated, have little meaning and provide no insight into the labour market. Recognition of this prompts use of the concept of underemployment as an indicator of labour market performance. However, the conceptual and practical problems with 'underemployment' in the sub-Saharan region

(and elsewhere) are at least as serious as those with trying to apply to international definition of unemployment. The definition recommended by the ILO, ‘underemployment exists when a person’s employment is inadequate in relation to specified norms or alternative employment, account being taken of his or her occupational skill (training and working experience)’, would seem to be beyond quantification. While a person working in an activity that does not use his or her skills is a social problem, there is no obvious way to measure the gap between the two, and if it could be measured it is not clear that it could be aggregated across individuals.

An alternative approach to underemployment is short time working. That is, a person could be defined as underemployed if her or his working time fell below some generally accept norm. While superficially quantifiable, this definition is arbitrary. Setting aside the problem of whether one includes in the aggregate measure those who work more than the norm, as discussed above, the definition presumes a clear distinction between work and non-work. This makes its application to family-based labour difficult if not impossible.

These problems of definition reflect the difficulty in drawing the boundary between self-employment and wage-employment. In many surveys, self-employment is taken as a residual category after other categories have been recorded (or not recorded). Moreover, employment in the agricultural sector, usually defined as self-employed or unpaid family helpers on household farms, is oversimplified. Micro-level evidence suggests that casual labour markets are dynamic in rural areas and non-agricultural employment in rural areas is significant and growing (Sender 2003). Therefore, when wage employment is under- or not reported, the missing gap is normally assumed to be self-employment. Underlying is the assumption that the people not recorded as wage workers in official statistics, must be either self-employed or unemployed (Sender 2003). In general, the magnitude of wage employment is probably underestimated in sub-Saharan countries and self-employment accordingly over-estimated because of a tendency to assume that workers outside the formal sector fall into the latter category.

The dichotomy, formal-informal, itself can be misleading. As Lachaud showed in his study of urban labour markets in West Africa (Lachaud 1994), observed occupations categories cut across conceptual categories. In this context, one could distinguish between the following classes of employment:

1. Wage workers in medium and large enterprises who are not subject to effective labour market regulation by the state, which usually includes the very poor;
2. The marginally self-employed with little working capital, including poor workers in informal activities;
3. The self-employed with more working capital, and hiring workers with employment contracts, covering a very diverse ‘middle’ class, in both formal and informal activities;

4. Workers with indefinite contracts, paid regularly, more skills, who are typically the ‘better off’, in formal occupations, concentrated in large urban areas; and
5. Unprotected formal wage workers, usually casual workers with variable remuneration.

This classification suggests that the ‘very poor’ in urban areas may be unprotected casual wage workers, in marginal unregulated enterprises, and the marginal self-employed with almost no working capital. In order to understand the trends and dynamics between growth, investment, employment and poverty reduction, one should have detailed and relevant information about this range of occupations.

The paucity of unemployment data in the sub-Saharan, and the statistical problems highlighted above, are clearly reflected in statistics from the *Global Employment Trends* (ILO 2003). Of the nineteen sub-Saharan countries reported in the report, only two had unemployment statistics for 1990 (Benin and Zambia), only four in 1995 (Nigeria, Benin, Mauritius and Botswana), with fourteen for 1999, drawn from a variety of statistical sources. The differences in unemployment rates across countries appear remarkable, ranging from a low of six percent in Zimbabwe to more than twenty-five in Burkina Faso and South Africa. This large variation results from differences in coverage and definitions, and renders the statistics unusable for cross-country analysis, and of questionable relevance within countries.

Compounding the difficulties discussed above, other problems in official statistical sources, household surveys and labour market analysis are:<sup>8</sup>

1. An arbitrary distinction between ‘primary’ and ‘secondary’ activities of a survey respondent, usually biased towards own-account farming in rural areas;
2. The classifications of salaried, wage, and own-account work, which is common in OECD countries, remain problematic in poor countries with occupational multiplicity, and activities that can be interpreted differently through careful questioning;
3. Bias against identifying many forms of irregular employment as wage-labour, due to biases from respondents, enumerators or analysts;
4. Huge diversity of own-account activities and need for occupational disaggregation, given that very different incomes and income strategies can be associated to the same branch of activity (trade, construction, transport, etc.); and
5. Insufficient attention to unpaid household labour, especially by women.

There are few data on rural labour markets and employment in any sub-Saharan country, to the point that the people involved are statistically ‘invisible’ (Sender 2003). There are no official time series data on trends or characteristics of rural labour markets in Africa, yet this is where the bulk of the poor live. Scattered micro-level

---

<sup>8</sup> See Pincus and Sender (2001) for further discussion.

research and surveys provide valuable sources of information for a understanding of these labour markets, but give little insight into changes over time. It is widely known that ‘wage agricultural workers comprise a high proportion among poverty-affected groups’ (ILO 2003: 6), but there are few data to verify this.

The ILO, responsible for establishing international guidelines for employment statistics, has stressed the lack of reliable data on agricultural wage labour in developing countries, emphasising the need for ‘comprehensive disaggregated statistics’ (ILO, 2003, 42). The data are particularly problematic in the sub-Sahara where, there are important discrepancies between data from official (government) sources and that from studies carried out by other agencies, including NGOs, in their project areas (Mwamadzingo, 2003, 31).

Agricultural wage workers may include permanent, temporary, seasonal, casual, migrant, and piece-rate workers, as well as those receiving some form of ‘in-kind’ payment (ILO 2003, 6). Their working conditions differ from country to country, and across employers in the same country. Understanding these differences may be critical to design anti-poverty strategies based on employment generation, yet little is known about them. Micro-level surveys have shown a variety of forms of labour arrangements based on market transactions and social networks. Village-level labour services are casual and extremely flexible. Labour is hired when labour shortages at peak times arise, when personal relations have been established between employers and workers, and when sporadic opportunities arise. Labour services can involve only a few days in which several people are hired. Some of the poorest people in a community may work on several smallholdings in the village and neighbouring areas, as part of their survival strategy (ILO 2003; Sender 2003). Payments vary, but piece-meal and task-based payments are most common. Frequently, the use of seasonal migrant labour also raises the bargaining power of local employers *vis-à-vis* local casual workers. There are rarely any employment benefits, apart from meals in time of harvest as an incentive to attract larger numbers of day workers on a short time basis. Moreover, non-farm employment includes a wide range of occupations often accounting for a substantial portion of annual income and concentrated in the dry season. Examples are brick making, pounding cereals, transport, various repair activities (for example, for bicycles and radios), brewing, hut construction, food preparation and sale, petty itinerant trade, and small shop based commerce based.

Contrary to what one might expect, evidence indicates that the poorest do not always form the bulk of agricultural wage workers. A wide range of occupations and survival strategies arise, as well as forms of ‘resistance to proletarianization’ by poor households, through maintaining access to land, reducing family consumption and over-exploiting family labour. This resistance is often related to intra-household power relations, whereby husbands prevent their wives and children from participating in the labour market. Empirical evidence shows that a large proportion of the poorest casual wage labourers in rural areas are women, and very often these women live in households where there is no male providing a source of income (Sender 2003). Thus, rural labour markets are gendered institutions, and understanding them requires information on intra-household power relations and gender dynamics.

This discussion of definitions and statistics indicate the need for comprehensive and well-funded programme to collect employment statistics on a regular and consistent basis. While some progress has been made in the measurement of poverty, the collection of information on employment has deteriorated. Since employment and its remuneration are the mechanisms by which poverty is reduced, the current state of knowledge and information for sub-Saharan countries is woefully inadequate. To design PRSPs poverty programmes in the absence of employment data is rather like attempting to design and monitor macro policy without data on national accounts.

Some of the measures which should be implemented and supported by donor funding are:

1. rejuvenation of enterprise surveys, which were common in the region until the mid-1990s;
2. regular (at least every five years) labour force surveys, which cover employment to supplement living standards surveys that focus on consumption and household characteristics; and
3. sample surveys of informal employment in selected rural and urban areas.

#### **Readings:**

Osmani, S. R.

2002 'Exploring the Employment Nexus: Topics in employment and poverty,' *A report prepared for the Task force on the Joint ILO-UNDP Programme on Employment and Poverty* (Geneva: ILO)

Sahn, David E., and David C. Stifel,

1999. 'Poverty Comparisons Over Time and Across Countries in Africa', Cornell University, Cornell Food and Nutrition Policy Programme, Working Paper 95, August.

Sender, John

2003. 'Rural Poverty and Gender: Analytical Frameworks and Policy Proposals' in *Rethinking Development Economics* edited by H-J Chang. London: Anthem Press.

Sender, John, Christopher Cramer and Carlos Oya

2005 *Unequal Prospects: Disparities in the Quantity and Quality of Labour Supply in Sub-Saharan Africa* Social Protection Working Paper 052 (Washington: World Bank)

<http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/0525.pdf>

### **2.3.2 Enumerated Employment in Sub-Saharan Countries**

As indicated above, available statistics on non-formal employment are virtually non-existent, and statistics on formal employment have so deteriorated in quantity and quality over the last ten years that their usefulness is highly questionable. In every other developing region it is possible for most countries to answer the question, has formal employment risen or fallen over the last several decades. Only in the sub-

Saharan region is it not possible to do this. To a great extent this results from fiscal austerity associated with stabilisation and structural adjustment programmes, and the apparently low priority given to employment issues in those programmes. Perhaps the most striking lack of statistics is the almost total absence across the region of a time series on public sector employment, which, in principle, should be collected as a matter of course for budgeting purposes.

Depending on one's definition, there are forty to forty-five sub-Saharan countries. A majority had regular surveys of enterprise employment through the 1980s. By the 1990s this fell to eight, and in the 2000s to five (see Table II.1). Of these five, four have data for the entire period, 1975-2003, and only two of these, Botswana and Zimbabwe were low-income (the others being South Africa and Mauritius). Further, with the exception of South Africa, there are no reliable data for any decade for the largest countries in the region, Nigeria, Ethiopia, Congo, Tanzania and Sudan.

The meagre available statistics suggest that formal sector employment increased in most countries over the ten years, 1975-79 to 1985-89 (Table II.1, Benin, Botswana, Burundi, Cote d'Ivoire, Kenya, Malawi, Mauritius, South Africa, Swaziland and Zimbabwe). Given that several of these countries had extremely low or negative rates of growth of per capita income, the numbers must be viewed with extreme scepticism. For the six countries with statistics for 1995-99 and 2000-03, four show increases, and one must be sceptical about this result for Cameroon.

The obvious conclusion to reach is that for the region as a whole and almost every individual country the statistics are so meagre and unreliable that no quantitative assessment can be made of the level or growth of employment. One is on safer ground estimating the share of formal employment in the labour force. In no continental country except South Africa is formal sector employment a majority of the labour force, and in a majority of countries it is below twenty-five percent. Without exception the result of economic growth is to shift the composition of employment from self-employment to wage employment. Were the data available, it would be extraordinary if per capita income and the share of formal employment were not positively related for the sub-Saharan region. Therefore, it is reasonable to conclude that poverty reduction in the region will be closely associated with the growth of wage employment. While conceding that the evidence to support this conclusion does not exist, this proposition is pursued in subsequent sections.

### **Readings:**

International Labour Office (ILO).

2003 *Global Employment Trends*. (Geneva: ILO)

Ravallion, M.

2001 'Growth, Inequality and Poverty: Looking beyond averages,' *Policy Research Working Paper 2558* (Washington: World Bank) [http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2001/03/26/000094946\\_01031305310627/Rendered/PDF/multi0page.pdf](http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2001/03/26/000094946_01031305310627/Rendered/PDF/multi0page.pdf)

Standing, Guy, John Sender and John Weeks

1996 *Restructuring the Labour Market: The South African Challenge*.  
(Geneva: ILO)

van der Hoeven, R. and van der Geest, W.

1999 "Africa's Adjusted Labour Markets. Can Institutions Perform?" In:  
*Adjustment, Employment and Missing Institutions in Africa* W. van der Geest  
and R. van der Hoeven (London: James Currey)

Table II.1: Available Time Series on Enumerated Employment  
in Sub-Saharan Countries, 1975-2003

| Country          | 1975-79 | 1980-84 | 1985-89 | 1990-94 | 1995-99 | 2000-03 | Percent<br>of Labour<br>Force |
|------------------|---------|---------|---------|---------|---------|---------|-------------------------------|
| 1. Benin         | 78      | 134     | 133     | 100     | na      | na      | 4                             |
| 2. Botswana      | 27      | 34      | 68      | 100     | 107     | 113     | 31                            |
| 3. Cameroon      | na      | na      | na      | 100     | 110     | 143     | 12                            |
| 4. Burundi       | 84      | 93      | 112     | 100     | na      | na      | 2                             |
| 5. Chad          | na      | na      | 77      | 100     | 96      | na      | na                            |
| 6. Cote d'Ivoire | na      | 111     | 105     | 100     | na      | na      | 10                            |
| 7. Kenya         | 66      | 75      | 92      | 100     | 96      | 92      | 14                            |
| 8. Malawi        | 74      | 75      | 90      | 100     | na      | na      | 13                            |
| 9. Mauritius     | 70      | 69      | 91      | 100     | 99      | 102     | 56                            |
| 10. Niger        | 139     | 103     | 106     | 100     | na      | na      | 1                             |
| 11. South Africa | 85      | 88      | 101     | 100     | 91      | 95      | 65                            |
| 12. Swaziland    | 75      | 82      | 87      | 100     | na      | na      | 27                            |
| 13. Zambia       | 105     | 104     | 102     | 100     | 90      | na      | 16                            |
| 14. Zimbabwe     | 82      | 85      | 91      | 100     | 103     | 92      | 32                            |

Source: ILO employment data base, <http://laborsta.ilo.org/>.

#### Box II.1: Perceptions of Unemployment in Sub-Saharan Countries

While it is questionable whether the standard definition of unemployment is relevant for most Sub-Saharan countries, surveys show people's perception of unemployment has a major impact on their assessment of their well-being. This is shown below from an Afrobarometer *Briefing Paper*.

Afrobarometer asks a simple series of questions. Do you have a job that pays cash income? Is it full-time or part-time? And are you looking for a job (even if you are presently working)?

Of respondents in 2002-3 across 15 African countries, two-thirds said they are unemployed (66 percent), of which the majority was not seeking a job. Some 12 percent of the respondents reported being employed part-time, most of whom kept looking for more work. Finally, just 22 percent reported possessing full-time paid employment, though almost half said they still sought a better job. The range of self-reported unemployment was wide, from a low of 45 percent in Ghana to a high of 89 percent in Mali.

Over time, the self-reported unemployment rate was unchanged, at least across six Southern African countries. In the aggregate, it was 65 percent in 1999-2000 and 66 percent in 2002-3. At the country level, self-reported unemployment went down over time in Botswana and Malawi (by 8 percentage points in both cases) and up in Namibia and Lesotho (by 16 and 9 percentage points respectively). In South Africa it remained stable at 55 percent.

To all appearances, paid employment has become a defining feature of an African's internal

sense of well being and validation in the community. Unemployment topped people's development agenda, not only in 1999-2000, but also in 2002-3. Even though this measure of unemployment held steady over time (at 17 percent of all problems cited), there are at least two reasons to think that it is a growing cause of popular concern. First, the proportion of people who mentioned unemployment as one of their first two priorities went up sharply, from 25 percent in 1999-2001 to 43 percent in 2002-3. Second, whereas the lack of jobs was cited as the most important problem in less than half (5 out of 11) of all countries surveyed in Round 1, by Round 2 it attained this lead status in two-thirds (10 out of 15) of all countries surveyed.

In the harsh light of public opinion, African governments receive low marks for economic management, especially job creation. Popular evaluations of government performance on basic economic tasks creating jobs, controlling inflation, and narrowing income gaps, only about one in three Africans interviewed thought that their government was performing well

Resistance to civil service retrenchment is deepening across the sub-Saharan sub-continent. In the short period between 1999 and 2003, there was a 10 percentage point shift *against* the proposition that "the government cannot afford so many public employees, so should lay some of them off." The largest drop-offs in favour of job cuts have occurred in Tanzania, Zambia, South Africa, and Ghana, during the period that the governments of these countries sought to streamline the civil service, popular resistance has grown to the policy of downsizing the state.

*Afrobarometer Briefing Paper No. 10* April 2004 (with minor editing), [www.afrobarometer.org](http://www.afrobarometer.org)

### Box II.2 Youth Unemployment in Namibia

Youth in Namibia are often referred to not as ends of the development process or as a resource driving socio-economic progress, but as “a ticking bomb” threatening to derail it. Economic policies since Independence have succeeded in bringing about macro-economic stability, but failed in generating high, sustained and broad-based growth necessary for economic and social upliftment, poverty reduction and job creation. Nowhere is the gap between the youth and adult generations larger than when it comes to economic opportunities and in the access to jobs. More than half of all youth aged between 18 and 29 years say that unemployment is the country’s most pressing problem. The youth are more concerned about unemployment than the older age groups and for good reasons.

Using a strict definition of unemployment to include those economically active, available for work and actively seeking employment gives a national unemployment rate of 20% in 2000 more or less unchanged compared to 1991. However, in 2000 the unemployment rate for 20-24 year olds was 42%, more than double the national average, and significantly higher than the 34% recorded in 1991. For all age groups younger than 35 years unemployment has been rising. Relaxing the definition of unemployment, to include those who may be considered economically active and available for work and including those who have given up looking for jobs, makes for an even bleaker picture. According to this broader definition that better reflects the real situation in the labour market unemployment in Namibia is at 35% for all ages much higher for youth groups; a staggering 60% of those under 24 years are unemployed.

It has been estimated that less than 30,000 new jobs were created in Namibia over the 1991-2001 period, just under 3,000 new jobs per year. Over the same period, the labour force rose by more than 115,000, adding more than 11,000 workers per year. Therefore there is a large gap between the amounts of jobs being created for the much larger amount of new entrants to the job market. The youth with less experience, and many having no qualifications, are therefore finding it increasingly difficult to find work. There are no signs that this situation will ease in the future. In the coming years we will see around 20,000 young Namibians turning 15 and most of these will be looking for meaningful employment. Under present conditions they are unlikely to find it.

*Namibia Human Development Report 2005: Investing in Youth and Human Development (minor editing)*

## 2.4 Macroeconomics of Employment and Livelihoods

### 2.4.1 Demand Constrained Growth in the Sub-Saharan Region

Using the analytical framework explained in Module 1 and the labour market analysis at the beginning of this module, the appropriate macro framework for employment generation is discussed below. One can summarise the approach by saying that the demand determined framework results in an empirical approach to fiscal policy, in which expenditure levels, revenue levels, and deficits are set subject to the goals of employment generation, poverty reduction, and macroeconomic stability. Within this framework, the function of policy is to achieve an economy’s potential and sustainable growth rate, and redistribute income at the margin through employment generation in order to increase the elasticity of poverty reduction with respect to growth. Public investment is the key to these goals, since it increases capacity, and can be designed to do so in a way that biases employment and income gains to the poor.

Because actual economies are demand determined, the intrinsic efficiency or productivity of investment determines the upper limit of the output-capital ratio, and the level of demand determines how close the economy approaches that upper limit (capacity utilisation). The growth performance of most of the economies of the sub-Saharan region over the last twenty-five years conforms to the demand constrained hypothesis. The statistics do not exist to relate growth to employment generation (see previous section). However, employment performance can be analysed indirectly from other macro variables.

Figure II.4 shows a scatter diagram with the average cross-country incremental gross capital output ratio on the horizontal axis (IGCOR), and the cross-country growth rate of GDP on the vertical axis (both in natural logarithms, for 1961-2000).<sup>9</sup> On casual inspection the negative relationship is obvious: higher rates of growth, by inducing greater capacity utilisation, lower the IGCOR. A simple regression yields a correlation coefficient close to .6 and an associated high level of statistical significance (F-statistic). In Figure II.5 this relationship is presented in a different manner. For four overlapping groups of sub-Saharan countries,<sup>10</sup> the gross capital-output ratio is generated by using simple regression equations like the one reported in Figure II.4. These simulated values show an almost continuous upward trend after the late 1970s, followed by an apparent cyclical movement from the early 1980s to the end of the period. Figure II.4 and II.5 are difficult to explain outside a demand determined process.

One major reason for the under-performance of sub-Saharan economies in growth and employment generation has been the relative stagnation of government expenditure. Figure II.6 shows the share of total government expenditure in GDP over thirty years for fifteen countries of the region.<sup>11</sup> During 1973-1981, total government expenditure rose steadily as a share of GDP, from below twenty percent to almost twenty-five percent, providing a strong demand stimulus. The growth rate of the countries during this nine year period was almost five percent per annum. After 1981, government expenditure fluctuated as a share of GDP. It imparted no consistent demand stimulus, nor did it provide counter-cycle stabilisation. During this twenty year period, the cross country growth rate fell to just under three percent per annum.

In light of the evidence that the economic growth of the sub-Saharan countries has been demand constrained over the last twenty-five years, we conclude that the observed high capital-output ratios and the low rate of job creation are not explained by the ineffectiveness of aggregate investment. Rather, realising the growth and employment benefits of investment has been limited by lack of demand, coincident,

---

<sup>9</sup> The gross capital-output ratios are rather high because they are inclusive of depreciation.

<sup>10</sup> There are four groups because data for some countries are not continuous. However, including only those countries with continuous data may give a misleading impression for the region as a whole. Therefore, statistics for all four groups are included, as explained in the notes to Figure 3.

<sup>11</sup> In the World Bank's *World Development Indicators 2003* this statistic is provided for almost all the countries of the region (over forty) for some years. Only for the countries included in Figure 2 are the series continuous rather than occasional.

and perhaps the consequence of conditionalities associated with stabilisation and structural adjustment programmes.

**Readings:**

Bruno, M., and W. Easterly

1998 'Inflation Crises and Long-Term Growth,' *Journal of Monetary Economics* 41 (3-26)

McKinley, Terry

2004 'Economic Policies and Poverty Reduction in Asia and the Pacific,' (New York: UNDP)

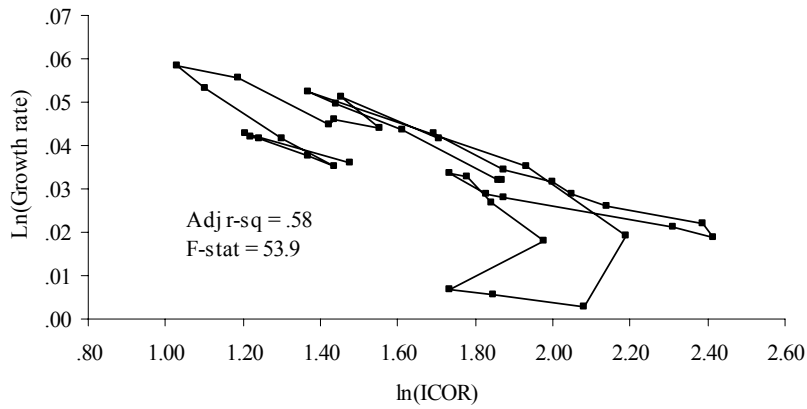
<http://www.umass.edu/peri/Calendar/conferences/McKinley%20paper%20griffin%20conference.pdf>

UNDP, Social Development and Poverty Elimination Division, Bureau for Policy and Programme Support

1997 *Module 4: Macroeconomic Policies and Poverty Reduction* (New York: UNDP)

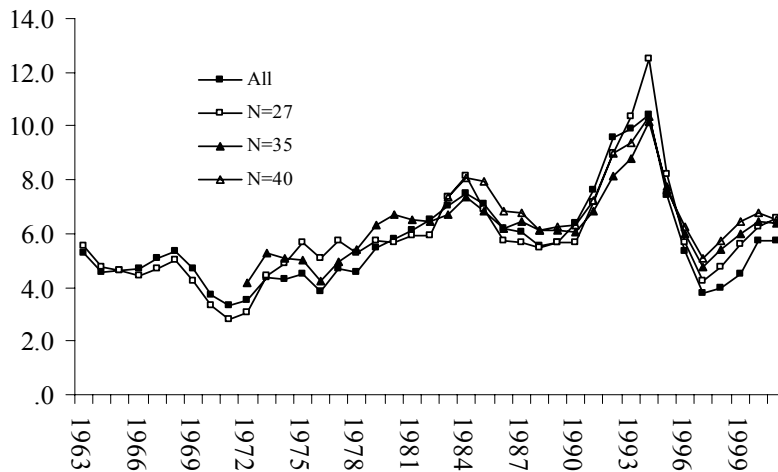
<http://www.undp.org/poverty/publications/tsd/tsd4/tsd-4.pdf>

Figure II.4:  
Sub-Saharan Countries: Scatter Diagram, Incremental  
Capital-Output Ratio (ICOR) and GDP Growth, 1961-2000



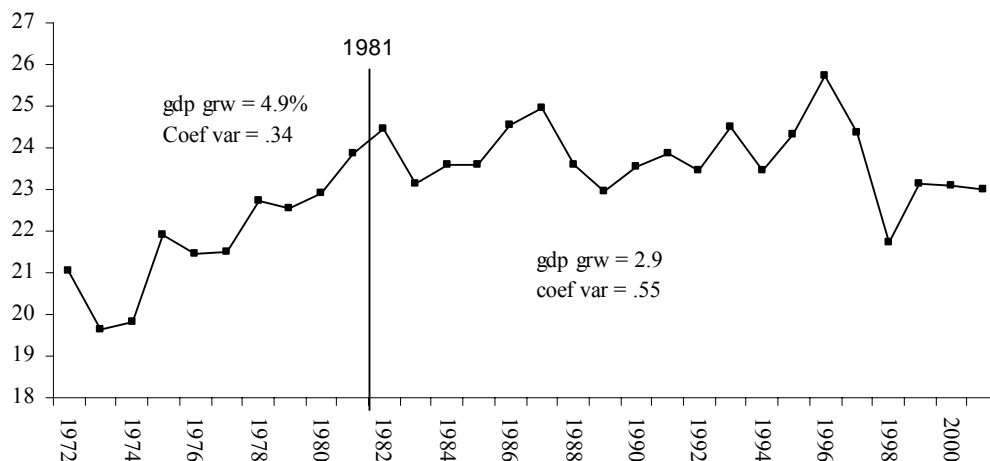
Notes: The scatter diagram is for all countries in the region, 1961-2001, using a three-year moving average for both variables.  
Source: *World Development Indicators 2003*.

Figure II.5:  
Sub-Saharan Countries: Simulated Marginal Capital-Output  
Ratio, 1961-2001



Notes: N is number of countries. 'All' and 'N=27' are for all years. 'N=35' includes 1970-2001; 'N=40' covers 1981-2001. The variables are 3-year moving averages. Estimated equations are the hypothesis,  $\ln(\text{ICOR}) = a_0 + a_1(\ln[\text{gdp grw}])$ . Degrees of freedom, R-squares and F-statistics are: (All) 37, .58 and 59.3; (N=27) 37, .55 and 37.1; (N=35) 28, .54 and 36.3; (N=40) 17, .26 and 6.1.  
Source: *World Development Indicators 2003*.

Figure II.6:  
Sub-Saharan Countries: Total Public Expenditure as Percentage of GDP,  
1972-2001 (15 Countries)



Countries: Botswana, Burkina Faso, Cameroon, Congo, Cote d'Ivoire, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Mauritius, South Africa, Swaziland, Uganda, Zimbabwe.

#### 2.4.2. Investment and Employment Generation

The previous section addressed the macroeconomic context of investment performance. This section considers the composition of investment between public and private. Three major conclusions stand out: aggregate investment in most sub-Saharan countries was substantially lower in the 1980s and 1990s than in the mid-to-late 1970s; public sector investment fell by much more than private sector investment; and the public sector must play the leading role in an employment generating investment programme.

Governments of the sub-Saharan region can and do attempt to increase the employment generating effect of private sector investment, but the instruments available to do so are few and frequently ineffective. In the case of the private formal sector, influencing investment choice through policies that affect relative prices are unlikely to have any significant impact. In most sub-Saharan countries wages are low and labour market regulations, to the extent they exist, typically are not enforced (van der Hoeven 1999). Thus, 'deregulation' of labour markets, even if one believes that it fosters more efficient factor prices (see Section I), has little scope for affecting private sector investment choice. Scope for policy influencing investment choice is further limited because much of the interest in the sub-Sahara by foreign investors is in the exploitation of natural resources. Investment choice is technologically limited in this sector, and employment generation can be quite small (for example, petroleum and natural gas).

While governments should attempt to induce private sector behaviour that is more employment generating, the most effective way it can do so is through public

investment. Public investment has a direct employment effect, which can be increased through an employment-focused policy strategy, in part by drawing on decades of work on labour-intensive public works, much of it by the ILO. These investments also have indirect employment effects, for example, through reducing transport costs in the case of road construction.

The aggregate share of investment in the sub-Saharan region is well below what would be necessary for economic growth that would have a substantial and sustained impact on poverty reduction through employment generation. A rate of growth of per capita income of about 2.5 percent per annum would be necessary to generate sufficient employment to achieve substantial poverty reduction and come close to the Millennium goals. Given population growth, this implies an overall growth rate of GDP of about five percent per annum. If one takes an optimistic estimate of the cross country gross capital output ratio of four, a gross investment rate of twenty percent is implied.

As Figure II.7 shows, this investment rate was only achieved for a brief period over the last forty years, during 1974-1982. After 1982, investment performance was well below this, falling into the range of fifteen to eighteen percent of GDP,<sup>12</sup> and the movement appears cyclical with no rising tendency. For the five countries with large populations and continuous data over the forty years (Figure II.8), the performance was notably worse. The average for these five countries, with about forty percent of the sub-Saharan population, fluctuated below eighteen percent. During 1990-2001 these countries had an average of just over fourteen percent, an investment share barely consistent with an economic growth rate to match population increase.

The consistently poor investment performance after the early 1980s can be explained in great part by a drastic fall in public investment. Figure II.9 gives the share of public investment in GDP in fifteen countries for which it is possible to obtain a continuous time series (the same countries included in Figure II.6). The data for these countries show an almost continuous decline after the late 1970s, to settle in the range of three to four percent during 1990-2001. If one had an accurate estimate of depreciation, it is doubtful that this low share of public investment would be sufficient to match the infrastructure needs of the countries, much less to contribute to and investment-led employment and poverty reduction strategy.

The low level of overall investment in sub-Saharan countries suggests the necessity for an employment generating public investment strategy focussing on 'crowding in' private investment. The 'crowding in' element of the strategy implies both increases in public investment, and for governments to assume a greater degree of strategic leadership than is presently the case.

---

<sup>12</sup> In Figure 7 the average for all countries rises above twenty percent in the 1990s, but this is an anomaly of the data, resulting from the inclusion of countries with non-continuous data series. In all three of the series in which the inclusion of countries is consistent across time, the cross-section averages are well below twenty percent (that is, the series indicated as N = 27, N = 35, and N = 40).

**Readings:**

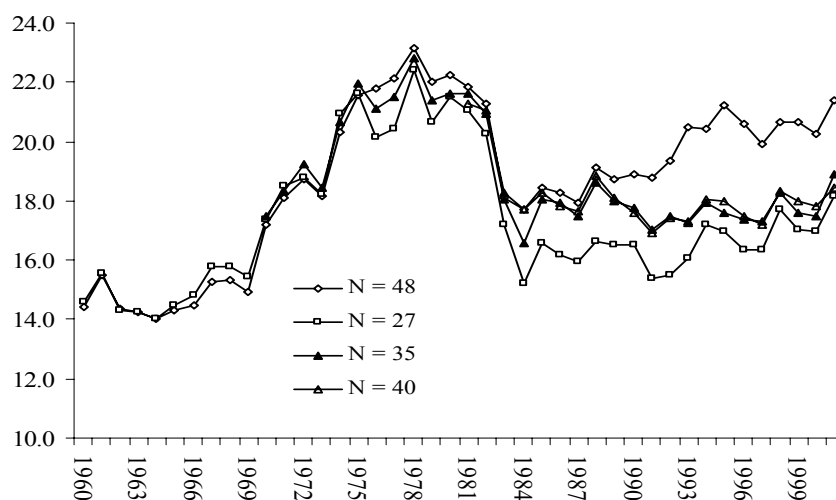
Roy, Rathin, and John Weeks

2004 *Making Fiscal Policy Work for the Poor* (New York: UNDP)

Weeks, John, Victoria Chisala, Alemayehu Geda, Carlos Oya Terry McKinley, Rathin Roy, and Alfredo Saad Fihlo

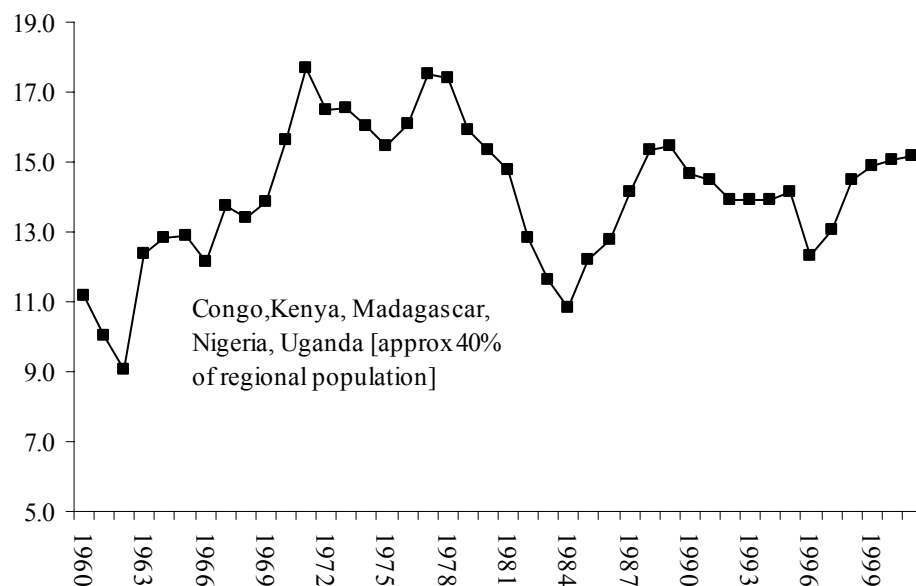
2006 *Economic Policies for Growth, Employment and Poverty Reduction* (New York: UNDP)

Figure II.7:  
Gross Domestic Capital Formation as percent of GDP,  
Sub-Saharan Countries, 1960-2001



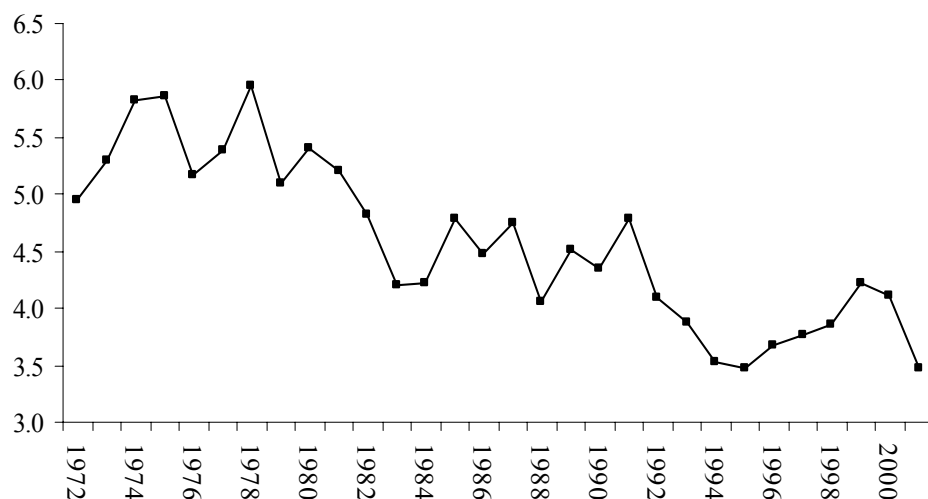
Notes: The letter N refers to number of countries in the series. 'All' and 'N=27' are for all years. 'N=35' includes 1970-2001, and 'N=40' covers 1981-2001.

Figure II.8:  
Gross Domestic Capital Formation as share of GDP,  
Sub-Saharan High Population Countries, 1960-2001



Congo, Kenya, Madagascar,  
Nigeria, Uganda [approx 40%  
of regional population]

Figure II.9:  
Sub-Saharan Countries: Public Investment as Percentage of GDP,  
1972-2001 (15 countries)



Countries: Botswana, Burkina Faso, Cameroon, Congo, Cote d'Ivoire, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Mauritius, South Africa, Swaziland, Uganda, Zimbabwe.

### 2.4.3. Role of Public investment

For the sub-Saharan countries, an investment-led employment strategy for poverty reduction could simultaneously provide a fiscal stimulus through increasing public investment. While such fiscal expansion might generate government deficits, there is no longer a consensus that these are necessarily inflationary. Also, as long as inflation is kept within a moderate range, it does not necessarily dampen growth or directly harm the poor.<sup>13</sup> Moreover, growth stimulated by fiscal expansion can generate the fiscal revenue needed to reduce budget deficits via the elasticity of taxes with respect to GDP.

While advocating for greater flexibility on stabilization policies, the UNDP could increase its advocacy of forms of public investment that can provide a more long-term, durable basis for human development and poverty reduction. This implies capital accumulation and technological innovation that can deliver lasting gains to the poor. A focused fiscal policy that fosters sustainable growth shifts emphasis in national poverty reduction strategies from short-term targeted interventions to longer-term programmes that alter the underlying structure of people's access to resources and technology.

<sup>13</sup> Bruno and Easterly find no correlation between growth and inflation when the latter is below forty percent (Bruno & Easterly 1998).

Public investment is the necessary ingredient in a pro-poor macro strategy, serving four benign purposes: demand management, capacity creation, employment generation and redistribution. In the absence of a robust public investment programme, the pro-poor element in fiscal policy is reduced to counter-cyclical interventions, progressive taxation, and redistributive expenditure, all from the current budget. While each of these is important, they do not create sustainable employment, and in many Sub-Saharan countries the capacity to implement progressive taxation and redistribution is limited. The progressiveness of the tax system is typically constrained by the relative low contribution of the formal sector to income generation, and redistributive current expenditure may be beyond the administrative capacity of the public sector.

Perhaps most important, basing a redistribution strategy on the current budget is not a growth or employment generating strategy. If sustained, it may create a new, more equal distribution which the economy will approach. However, except for a possible one-off impetus resulting from the positive incentives to the poor of redistribution, it has little impact on the sustainable growth rate. For this reason, public investment is the *sine qua non* of a pro-poor growth strategy, and the reduction of public investment undermines that strategy.

**Reading:**

Oya, Carlos, and John Weeks

2004 *Investment for Poverty Reducing Employment in Africa: Review of Case Studies and an analytical framework* (New York and London: BDP/UNDP and CDPR)

Roy, Rathin, and John Weeks

2004 *Making Fiscal Policy Work for the Poor* (New York: UNDP)

## 2.5 Impact of HIV/AIDS on Labour Supply

To this point the discussion of employment has focused on the demand side, generating employment for a growing population. When considering employment growth, and the relationship between employment and poverty reduction in sub-Saharan countries, it is also necessary review the possible impact of HIV/AIDS on labour quantity and quality. It should be stressed that this discussion refers to labour market effects, and is not an analysis of the relationship between poverty and HIV/AIDS, which would require an interdisciplinary approach.

The seriousness of the HIV/AIDS problem is indicated by evidence that shows that in the high prevalence countries in Southern Africa, less than forty percent of current survivors to age fifteen will reach their sixtieth birthdays (Ngom and Clark, 2003: 2).<sup>14</sup> For both females and males of working age, higher national HIV prevalence rates increase the probability of dying between the ages of twenty and sixty, but the impact on females in this age group generally occurs at *younger* ages and is more

---

<sup>14</sup> 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).

focused on a narrow age band (ibid: 7). Thus, throughout Sub-Saharan Africa young women (aged 15-24 years) are twice as likely as young men to be living with HIV/AIDS.<sup>15</sup> Recent South African data indicate even greater gender disparities, with females in this age group being three 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) were HIV positive in South Africa, compared to only 7.6 percent of males in the same age group (Reproductive Health Research Unit, 2004: 29). A smaller survey in Kenya found that over twenty-seven 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). Thus, the raw statistics suggest that the endemic is having a substantial impact on labour supply, through early death and debilitation.

In high prevalence countries, South Africa being one, as well in specific areas within countries, for example, Kisumu in 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 and for the child-raising obligations of older women, who will devote years to washing, feeding and nursing the chronically ill (Steinberg *et al*, 2002:15). There are also important implications for the children of this 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.<sup>16</sup>

These inter-generational effects on labour quality and quantity will probably have more serious economic consequences than those suggested by the aggregative *quantitative* changes in labour supply projected by various studies. 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, although this proportion is obviously much higher in some countries than others (Table II.2).

There is disaggregated evidence to suggest that the risk of HIV-related deaths is particularly high for those young female adults who have few years of education (UNICEF, 2004). Thus, in South Africa, among those adults aged 20-24, HIV positive females had completed significantly fewer years of education than HIV negative females. 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; the consequences for the quality of the labour that will be supplied by their children are extremely serious.

---

<sup>15</sup> See UNICEF, <http://www.unicef.org/lifeskills/index.html>.

<sup>16</sup> 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).

It must be stressed that despite accumulating information on HIV/AIDS, most 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 very rough estimates of 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. Inadequate HIV data collection and shortcomings in standard demographic data mean that policy makers are limited in their ability to understand and effectively respond to labour market changes.

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 (under twenty-five) in Sub-Saharan Africa up to 2015 (28.2 percent) is projected to be about as great as the increase in the adult (over twenty-five) labour force. Thus, the HIV/AIDS endemic does not reduce the urgency for employment generation.

### Readings:

International Labour Organisation

2004 *HIV/AIDS and Work: Global Estimates, Impact and Response* (Geneva, ILO)

Ngom, P. & Samuel Clark

2003) *Adult Mortality in the Era of HIV/AIDS: Sub-Saharan Africa* (New York, Population Division, Department of Economic and Social Affairs, United Nations Secretariat)

Table II.2: Estimated and Projected Labour Force Losses from HIV/AIDS, Selected Countries

| <u>Countries</u>    | <u>HIV/AIDS affected (000s)</u> | <u>HIV/AIDS impact**</u> |
|---------------------|---------------------------------|--------------------------|
| Côte d'Ivoire       | 399.4                           | 5.2                      |
| Ethiopia            | 1,336.8                         | 2.1                      |
| Ghana               | 292.3                           | 1.5                      |
| Kenya               | 1,003.5                         | 4.2                      |
| Lesotho             | 211.3                           | 8.3                      |
| Malawi              | 737.7                           | 6.9                      |
| Mozambique          | 1,128.5                         | 2.4                      |
| South Africa        | 3,698.8                         | 2.5                      |
| Swaziland           | 134.1                           | 4.9                      |
| Uganda              | 454.4                           | 8.4                      |
| Tanzania            | 1,401.3                         | 3.3                      |
| Zambia              | <u>726,800</u>                  | <u>10.2</u>              |
| Total, 35 countries | 18,610.5                        | 3.2                      |

Source: ILO, 2004.

\*Estimated number of HIC positive people 15-64 in the labour force in 2003.

\*\*Projected cumulative mortality losses to the total labour force from HIV/AIDS, as an equivalent proportion of the total labour force, 2005.

## 2.6 Conclusion

A deconstruction of Neoclassical labour market theory comes to the conclusion that an adequate rate of employment creation is not the automatic outcome of unregulated markets. Indeed, of all the markets in an economy, the labour market is the one least likely to 'clear' in a way that eliminates excess supply (unemployment). This issue is not whether governments need to intervene in labour markets to achieve socially positive outcomes, but which interventions will be most effective.

As shown in a separate module, labour market policy is part of an industrial policy, and industrial policy represents a central component of a country's general development policy. One the most important links between employment and industrial policy is public investment, which sharply declined in Africa in the 1980s and 1990s. Generating employment that will be poverty reducing requires fostering an employment-intensive growth process that is integrally linked to a growth process that is pro-poor. The most important policy instrument for achieving employment-intensive growth is public investment. The key role of public investment brings the discussion back to the issues raised in Modules 1 and 3: creating fiscal space for public investment that is employment generating and redistributive.

A serious deficiency for designing effective labour market policies in Africa is the extremely serious lack of appropriate information. In part as a result of the emergence of PRSPs which require an analysis of a country's poverty profile, resources have been concentrated in living standards measurement surveys (LSMS). These play an important role in the policy making process, and equally important are labour force surveys (LFS). The key difference between the two is that LSMS are designed to measure living standards, usually through detailed questioning about past consumption behaviour. Complementary, but quite different, are LFS that focus on sources of income and types of work. Because each is quite lengthy in order to approach an acceptable degree of accuracy, a survey covering both living standards and work would be impractically long. Therefore, both types are required on a regular basis in order to make the link between poverty and employment.

Until the 1990s, one could justify treating labour supply in Africa as autonomous. However, the spread of HIV/AIDS rendered labour supply endogenous. The health of people and public measures to improve health are as important on the supply side of the labour market as employment generation policies are on the demand side.

The labour market policies which characterise developed and middle income countries, such as minimum wages, unemployment support, and workplace protection, are of limited relevance in most African countries. It is for this reason that the module has stressed the importance of public investment as a tool of labour market policy. Detailed consideration of public investment, its financing, implementation and employment generating potential, are the subject of a separate module.

## References

- Bradshaw, D., R. Laubscher, R. Dorrington, D.E. Bourne & I. M. Timaeus  
2004 'South Africa Cause of Death Profile 1996: Burden of disease in Transition,' *South African Medical Journal*, 94(4), 278-9.
- Bruno, M., and W. Easterly  
1998 'Inflation Crises and Long-Term Growth,' *Journal of Monetary Economics* 41 (3-26)
- Dagdeviren, Hulya, Rolph van der Hoeven and John Weeks  
2002 'Poverty with Growth and Redistribution,' *Development and Change* 33, 3, pp. 383-413
- Demery, L., and M. Walton  
1998 'Are Poverty and Social Goals for the 21st Century Attainable?' *IDS Bulletin*, 30
- Elberts, Chris and Peter Lanjow  
2003 *Are neighbours equal? Estimating local inequality in three developing countries*, WIDER Discussion Paper 2003/52. Helsinki: United Nations University, WIDER.
- Geda, Alemayehu, Abebe Simeles and John Weeks  
2002 'The Pattern of Growth, Poverty and Inequality in Ethiopia: which way for a pro-poor growth?' Background Paper Prepared for the Ministry of Finance and Economic Development, Addis Ababa
- Glynn, J., B. Carael, M. Auvert, M. Auvert, M. Kahindo, J. Chege, R. Musonda, F. Kaona & A. Buve  
2001 'Why do Young Women Have Much Higher Rates of Prevalence of HIV than Young Men? A Study in Kisumu, Kenya and Ndola, Zambia,' *AIDS*, 15(Supplement 4), S51-S60
- Hahn, Frank  
1984 *Equilibrium and Macroeconomics*. Oxford: Basil Blackwell
- Ilfie, John  
1987 *The African Poor: A History*. Cambridge: Cambridge University Press.
- International Labour Office (ILO)  
2003 *Decent Work in Agriculture*. ILO-Bureau for Workers' Activities. Background Paper International Workers' Symposium on Decent Work in Agriculture. Geneva: ILO  
2003 *Global Employment Trends*. (Geneva: ILO)
- International Labour Organisation  
2004 *HIV/AIDS and Work: Global Estimates, Impact and Response* (Geneva, ILO)
- Khan, Mohsin and P.Montiel  
1989 'Growth-Oriented Adjustment programs: A Conceptual Framework', *IMF Staff Papers*, Vol. 36 No. 2 pp. 279-306
- Lachaud, J-P  
1994 *Pauvrete et marche du travail en Afrique subsaharienne: analyse comparative* (The Hague: Institute of Social Studies)
- Lerche, Jens, Jonathan Pincus and John Weeks

- 2004 *Poverty Reduction Strategy Process and National Development Strategies in Asia (A report to DFID): Synthesis Report* (London: CDPR)
- McKinley, Terry  
2002 'Draft UNDP Policy Note: The role of economic policies in poverty reduction,' (New York: UNDP)
- Malloch Brown, Mark  
2002 'Human Security and the Future of Development Cooperation,' speech to the Development Cooperation Forum, Atlanta, 21 February 2002
- Mwamadzingo, Mohammed.  
2003 *Assessing the Decent Work Deficit in African Agriculture: Priority Issues*. International Labour Organisation, Sub-Regional Office for Southern Africa. Discussion Paper 21. Geneva: ILO.
- Ngom, P. & Samuel Clark  
2003) *Adult Mortality in the Era of HIV/AIDS: Sub-Saharan Africa* (New York, Population Division, Department of Economic and Social Affairs, United Nations Secretariat)
- Osmani, S. R.  
2002 'Exploring the Employment Nexus: Topics in employment and poverty,' *A report prepared for the Task force on the Joint ILO-UNDP Programme on Employment and Poverty* (Geneva: ILO)
- Oya, Carlos, and John Weeks  
2004 *Investment for Poverty Reducing Employment in Africa: Review of Case Studies and an analytical framework* (New York and London: BDP/UNDP and CDPR)
- Ravallion, M.  
2001 'Growth, Inequality and Poverty: Looking beyond averages,' *UNU/WIDER Development Conference on Growth and Poverty*, Helsinki, 25-26 May
- Reproductive Health Research Unit (RHRU)  
2004 *HIV and Sexual Behaviour Among Young South Africans* (Bertsham, South Africa: RHRU)
- Roy, Rathin, and John Weeks  
2004 *Making Fiscal Policy Work for the Poor* (New York: UNDP)
- Sahn, David E., and David C. Stifel,  
1999. 'Poverty Comparisons Over Time and Across Countries in Africa', Cornell University, Cornell Food and Nutrition Policy Programme, Working Paper 95, August.
- Sender, John  
2003 'Rural Poverty and Gender: Analytical Frameworks and Policy Proposals' in *Rethinking Development Economics* edited by H-J Chang. London: Anthem Press.
- Sender, John, Christopher Cramer and Carlos Oya  
2005 *Unequal Prospects: Disparities in the Quantity and Quality of Labour Supply in Sub-Saharan Africa* Social Protection Working Paper 052 (Washington: World Bank)  
<http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/0525.pdf>

- Sender, John and Jonathan Pincus  
 2001 'Preliminary Results from the Indonesian People's Security Survey: Characteristics of the Most Insecure and Vulnerable Households', Mimeo.
- Smith, L. & Lawrence Haddad  
 1999 *Explaining Child Malnutrition in Developing Countries: A Cross-Country Analysis*. FCND Discussion Paper, 60 (Washington, D.C, IFPRI)
- Standing, Guy, John Sender and John Weeks  
 1996 *Restructuring the Labour Market: The South African Challenge*. (Geneva: ILO)
- Steinberg, M., Saul Johnson, Gill Schierhout & David Ndegwa  
 2002 *Hitting Home: How Households Cope with The Impact of the HIV/AIDS Epidemic. A Survey of Households Affected by HIV/AIDS in South Africa* (Washington D.C, Henry J. Kaiser Family Foundation)
- Taylor, Lance (1991). *Income Distribution, Inflation and Growth: Lectures on Structuralist Macroeconomic Theory*. Cambridge, Mass: The MIT Press  
 United Nations Children's Fund  
 2004 *Girls, HIV/AIDS and Education*, <http://www.unicef.org/lifeskills/index-8657.html>
- United Nations Development Programme  
 2003 *Evaluation of the UNDP's Role in the PRSP Process: Main Report* (New York: UNDP)
- UNDP, Social Development and Poverty Elimination Division, Bureau for Policy and Programme Support  
 1997 *Module 4: Macroeconomic Policies and Poverty Reduction* (New York: UNDP)  
<http://www.undp.org/poverty/publications/tsd/tsd4/tsd-4.pdf>
- van der Hoeven, R. and van der Geest, W.  
 1999 "Africa's Adjusted Labour Markets. Can Institutions Perform?" In: *Adjustment, Employment and Missing Institutions in Africa* W. van der Geest and R. van der Hoeven (London: James Currey)
- Weber, Max  
 1968 *Economy and Society* (Berkeley: University of California Press)
- Weeks, John  
 1989 *A Critique of Neoclassical Macroeconomics* (London and New York: Macmillan & St Martin's)