

**Implications of globalization and
economic restructuring for skills
development in sub-Saharan Africa**

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Foreword

In February 2002, the ILO established an independent World Commission on the Social Dimension of Globalization, co-chaired by President Tarja Halonen of Finland and President Benjamin Mkapa of Tanzania and comprising 26 eminent commissioners from a wide range of walks of life and different parts of the world, each serving in their individual capacity. Its broad goals were: to identify policies for globalization that reduce poverty, foster growth and development in open economies, and widen opportunities for decent work; to explore ways to make globalization inclusive, so that the process can be seen to be fair for all, both between and within countries; to promote a more focused international dialogue on the social dimension of globalization; to build consensus among key actors and stakeholders on appropriate policy responses; and to assist the international community forge greater policy coherence in order to advance both economic and social goals in the global economy.

The report of the World Commission, *A fair globalization: Creating opportunities for all*, was released on 24 February 2004. It is available on the Commission's website www.ilo.org/public/english/wcsdg/index.htm.

A secretariat was established by the ILO to support the Commission. Among other tasks, it compiled information and commissioned papers on different aspects of the social dimension of globalization. The aim was to provide the Commission with documentation and data on a wide range of options and opinions concerning subjects within its mandate, without committing the Commission or individual Commissioners to any particular position on the issues or policies concerned.

Material from this background work is being made available as working papers, as national and regional reports on meetings and dialogues, and in other forms. Responsibility for the content of these papers and publications rests fully with their authors and their publication does not constitute an endorsement by the World Commission or the ILO of the opinions expressed in them.

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Director
Policy Integration Department

Preface

The Technical Secretariat to support the World Commission on the Social Dimension of Globalization first prepared a synthesis of ILO activities on the Social Dimension of Globalization (published as Working Paper No. 1 in this series). Documentation on the work and outcomes of other major commissions, an ideas bank, a database and knowledge networks of experts and social actors were subsequently developed. These networks have dealt with several topics, including: inclusion at the national level for the benefits of globalization to reach more people; local markets and policies; cross-border networks of production to promote decent work, growth and development; international migration as part of the Global Policy Agenda; international governance (including trade and finance); the relationship between culture and globalization; and values and goals in globalization. Gender and employment aspects were addressed throughout this work. The Reports on the Secretariat's Knowledge Network Meetings are available on the Commission's web site or in a special publication from the ILO (ISBN 92-2-115711-1).

During the course of these activities, a number of substantive background papers were prepared, which are now made available for wider circulation in the Policy Integration Department's Working Paper series (Nos. 16 to 38), as well as on the Commission's website.

In this paper Dr. Johanson, an independent consultant, discusses the role skills development can play in avoiding the problems of globalization and structural adjustment and realizing their benefits and what can be done to position countries to capture the employment and wage benefits of globalization. He argues that higher and more evenly distributed levels of education will help mitigate wage inequities that have been widened by globalization. However, until new cohorts of educated workers enter the workforce, investment in additional training for the current workforce may provide a substitute, although the lower the average educational attainment, the less perfect the substitute. Investments have to be sustained for new labour force entrants. The important points are that, first, the training must be recurrent or continual to update the skills of workers so as to enable them to stay abreast of new technologies. Second, the training must not be too narrow, because adaptability is another key to success in the modern world. Building capacity for lifelong recurrent training and for training for displaced workers is also an important institutional measure.

Non-governmental training institutions and enterprises account for the vast majority of the regional capacity for skills development and should be part of the reform dialogue. Multinational enterprises can play a special role in the development and dissemination of skills. However, their contribution depends on the extent to which they are well integrated with institutions in the host country and need to be embedded in a network of local suppliers and education and training establishments.

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May 2004

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1. Introduction

“Globalization” refers to the increasing integration of economies around the world, especially in terms of trade and financial flows, but also including labour and knowledge.¹ One manifestation of globalization was the sharp increase in private capital flows to developing countries during much of the 1990s (IMF, 2000: 5). The removal of trade barriers has promoted more efficient markets by allowing each country to specialize in what it does best, that is to have a more refined division of labour. Global markets offer the benefits of increased efficiency in terms of better access to capital flows, technology, cheaper imports and larger export markets (IMF, 2000). Both sides of the income divide can benefit from globalization. Developed countries can tap into larger markets for innovations. Developing economies can gain access to these technical advances while sharing in global production via multinational enterprises (Sachs, 1998). Globalization permits ease of entry for those with skills, products and ideas. Declining transaction costs, such as the declining costs of electronic communication, are lowering entry barriers (Yusuf, 2001: 13-14).

However, markets do not automatically ensure that the benefits of increased efficiency are shared by all. Globalization does not progress evenly. Globalization has exacerbated differences in the relative advantages of countries (ILO, 2000a: para. 2). Volatile capital movements have shown that the opportunities of globalization do not come without risks (IMF, 2000). Globalization has made it easier for businesses to choose low-skilled workers at lower pay in other parts of the world, leading to lay-offs and economic hardship. The perception is widespread that workers in some countries and industries lose their jobs, the unskilled see their earnings fall and households face higher economic instability as a result of changes in terms of trade, global competition and the introduction of new technologies (Rama, 2003: 26). For some workers, globalization has meant improved career opportunities, living standards and prosperity, while for other workers it has resulted in job insecurity or unemployment, declining living standards and poverty (ILO, 2000a: para. 2).

This paper addresses the following questions from the perspective of skills development: how can these problems be avoided and the benefits of globalization be realized? What can be done to position countries to capture the employment and wage benefits of globalization? The paper approaches these questions first by examining the literature on the labour market and skill consequences of globalization, then by summarizing recent assessments of vocational skills training in Africa. The final section presents conclusions and recommendations.

¹ The cultural, political and environmental dimensions of globalization are not covered in this paper.

2. Labour market and skill implications of globalization

First it is important to spell out the labour market consequences and skill implications of globalization. This involves three main topics: (a) changes in skill demands; (b) wage inequality; and (c) the brain drain.

2.1 Changes in skill demands

Employment of skilled workers has been on the rise in both developed and developing countries. The rate of growth of employment in advanced countries has usually been highest for professionals and technicians, while declining for production workers. In developing countries, professionals and technicians have also seen high growth rates (ILO, 1999: 33). Several factors account for this growth, including capital-skills complementarity.

2.1.1 Capital-skills complementarity

The economic literature, as reviewed by O'Conner and Lunati (1999), suggests that a more educated labour force can raise the returns on investment in physical capital, or in other words that skills and capital are complementary. For example, Mincer (1995) notes the general tendency for skill demands to rise with development as a result of capital accumulation. According to Barro (1991), the stock of human capital affects growth principally through physical capital investment, with the two types of capital being complementary. The variation in investment rates in physical capital across countries is partly a function of absorptive capacity, which in turn depends on the availability of human capital and other institutional factors. The rate of return on investment in physical capital would appear to be a positive function of the supply of human capital; where the latter is scarce, the former is low and so too is the incentive to invest. If so, raising levels of educational attainment should, *ceteris paribus*, increase returns on physical capital and thereby boost investment rates. Benhabib and Spiegel (1994) found a significant positive association between the stock of human capital and productivity growth.

Investment in physical capital, particularly capital equipment, is an important determinant of growth. Capital-skill complementarity largely reflects the skills required to master technologies in newly acquired capital equipment (O'Conner and Lunati, 1999: 27). Specifically, more educated people are needed to operate higher priced capital equipment incorporating sophisticated technology. In addition, the use of expensive machinery means a rise in the cost of machine down time and hence a higher return on preventive maintenance technicians (*ibid*: 21). It can be argued that globalization raises capital flows from developed to developing countries. This means that, even without technology imports, capital output ratios in developing countries would rise and, given the complementarity between capital and skills, this would raise the relative demand for skilled labour (Mayer, 2000: 25).

It is not possible to disentangle the interlinked factors responsible for changes in skill demands, but at least three main forces are at work in increasing the demand for skills worldwide: technological change, changes in work organization and trade openness.

2.1.2 Technological change

Technological change has shifted the relative demand towards skills in the labour force (World Bank, 2002a: 78). New technologies are knowledge and skill intensive and there is a need to train people to work with these technologies (IMF, 2001: 3). As with capital-skill complementarity, there is also complementarity between technology and skills. The stock of human capital appears to be positively correlated with technological dynamism. The introduction of new technologies in lower income countries implies a reallocation of labour from low to high productivity activities, which are generally both more capital and skill intensive. This means that increased technology imports are likely to be accompanied by a rising ratio of capital to labour, and an increase in the demand for skilled labour (Mayer, 2000: 23).

Nelson (1994) suggests that the mastery of a technology is like a skill that needs to be learned, normally at the level of an organization or team. Effective learning-by-doing depends on the education and skills possessed by the workforce, with interactive skills of particular importance in fostering teamwork. What accounts for rapid growth is the combination of education (and the skills acquired) and the technologies employed in organizations that are well designed to exploit them.

Endogenous growth theory considers that the main reasons for poverty are gaps in the endowment of knowledge and in the limited capability of developing countries to absorb new knowledge. The latter implies that development policy should concentrate on the interaction between technology and skills with a view to facilitating a reduction in the knowledge gap (Mayer, 2000: 1).

Globalization can ignite a “virtuous circle” of technology upgrading and skill accumulation in technological latecomers. “The realization of technological improvements in backward countries is closely interrelated with their educational attainment: their skill supply influences the amount and degree of sophistication of technology which can be adopted and efficiently used, while in turn the amount and sophistication of newly introduced technology impacts on the demand for skills.” (Mayer, 2000: 2)

One growing aspect of technology, the information and communication technology (ICT) revolution, is perhaps the most important of any technological revolution over the past two centuries. The new technologies have led to the introduction of a wide range of new products, sharp declines in transaction costs and vastly improved economic efficiency. Surveys of the introduction of new IT technologies have found a strong association between the use of new technologies and the rise in skill and educational requirements (ILO, 1999: 37-38; ILO, 2000a: para. 14).

Information exchange is an integral, but often overlooked, aspect of globalization. Direct foreign investment brings not only an expansion in the stock of physical capital, but also technical innovation. More generally, knowledge about production methods, management

techniques, export markets and economic policies is available at very low cost. It represents a highly valuable resource for developing countries (IMF 2000, 5). Internet technology is not particularly expensive or capital intensive, but it is human capital intensive

2.1.3 Changes in work organization

As noted in an ILO report on the social impact of globalization, the progressive adoption of new work organization techniques is among the key factors behind globalization (ILO, 2000b: 15). Enterprises have traditionally organized work around a tight division of labour and narrowly designed specialized jobs under the close control of supervisors. The assumption of these traditional management systems is that the most efficient way of organizing the production of standardized goods for a mass market is for each task to be broken down into its most elementary components. Traditional (Taylorist) forms of work organization minimize the skills required of most employees to perform the job. However, increased competition and the introduction of ICT have prompted many firms to undertake fundamental changes in their internal organization and work practices. These include changes in factory lay-out, the flow of production, quality assurance and the use of inventory. There is no one model of such transformation, but collectively re-organized firms are called “high-performance enterprises” (ILO, 1999: 41-43). High-performance enterprises operate on the assumption that competition is based not just on cost, but also on incremental improvements in the quality of the goods or services produced.

The changes in organization and work practices in high-performance enterprises have profound implications on the skills required from employees (that is, skills are a derived demand, based on the way in which work is organized). High-performance work organizations typically use self-managed work teams, multi-skilling,² job rotation, cross-training and the devolution of decision-making. These methods confer greater flexibility on the organization, but can only work if employees acquire technical skills in addition to those normally required in a traditional organization (Ashton and Sung, 2002: 83). Designing work in this way inevitably demands higher levels of skills from employees. In the high-performance workplace, workers must possess the cognitive and diagnostic skills necessary to perform a broad range of frequently changing tasks (Howell, 1994: 6). For workers, it means they must acquire the social and problem-solving skills needed for the management of production, in addition to the technical skills required. This generates the demand for learning to become a continuous process (Ashton and Sung, 2002: 73). For example, the introduction of job rotation and multi-skilling increases the range of tasks and the technical skills required by employees. The use of teamworking and self-managed work teams means that workers develop better communication and decision-making skills (ibid: 3).

Learning and training are necessary but insufficient conditions for improved performance and productivity at the enterprise level. As Ashton and Sung (2002: 12) emphasize, for training and workplace learning to be effective, they must be “bundled” together with other organizational and work practices, such as regular performance appraisals, profit-related

² Multi-skilling involves upgrading jobs through the addition of new skills. It promotes greater workforce flexibility and productivity by creating a better trained and more competent workforce. Multi-skilling has grown substantially in South Africa, from 27 per cent of enterprises in 1994 to 47 per cent in 2001 (Westcott, 2001: 12-13).

bonuses, information on business plans and performance targets, and regular feedback on performance.

Evidence from micro-studies suggests that considerable restructuring towards new forms of work organization has also taken place in developing countries (ILO, 1999: 44). Because new forms of work organization require greater responsibility and greater skills from the workforce, low literacy rates in developing countries impede their introduction (a Zimbabwean furniture producer which used intensive worker training and quality circles to restructure its operations and significantly improve the level of productivity of its poorly educated workforce reduced costs by 35 per cent) (ibid: 45). Firms introducing new forms of work organization in developing countries, like their advanced country counterparts, typically invest heavily in the further training of the workforce. The rise in firm-level investment in training has also been linked to the influence of the global standards of multinational corporations (ibid: 46).

According to a recent survey in South Africa, an average of 3.3 per cent of payroll was spent on training by firms in 1997. Those companies which spent the most on training were also high performers and viewed training not merely as a cost item, but also as an integral part of the growth of the company (ILO, 2000b: para. 109). The ILO case study of South African Breweries (SAB) ILO illustrates the key role of skills upgrading in a high performing organization. SAB spends almost 5 per cent of its payroll on staff training with a view to achieving a “qualified, educated and flexible work force that is capable of managing all requirements of changing competitive and technological challenges.” To this end, it has incorporated a systematic “competency acquisition process” based on training needs assessments and individual “people balance sheets” (ILO, 2000c).

2.1.4 Trade openness, competition and FDI

Several authorities agree that globalization places a premium on skills. With globalization, the competitiveness of regions is determined by skills rather than their resource base (Shankar and Shah, 2001: 1). Openness causes a demand shift in skills through induced capital deepening or technological change. Globalization raises capital flows which, in turn, raise the demand for skilled labour (Mayer, 2000: 23). Benhabib and Spiegel (1994), together with Lucas (1990), suggest that the stock of human capital serves to attract investment in physical capital, notably through foreign direct investment. Skills constitute a pull factor for foreign direct investment (Nunnemkamp, 2002: 35). Education and training are likely to attract investment in manufacturing (Velde and Morrissey, 2003: 19). Thus, a well-organized education system and a better educated labour force can have the effect of attracting globalized financial capital. In contrast, Lucas suggests that lack of human capital may deter foreign investment from a country, since physical capital tends to go to areas where human capital is abundant.

Openness does seem to stimulate investment in physical capital. If human capital and physical capital are complements, the higher investment-to-GDP ratio in open economies would tend to increase their demand for skilled labour without a corresponding increase in supply. This could explain the tendency for the relative wages of skilled workers to rise with economic opening. Given capital-skill and technology-skill complementarity, this suggests that more open economies should experience a more rapid growth in demand for skilled workers than closed ones (O’Conner and Lunati, 1999: 28-29).

All three factors – globalization, technological change and changes in work organization – are closely linked. “[T]he new information technology, by reducing the cost and increasing the speed of communication, has played a major role in globalizing production and financial markets; in turn, globalization, by intensifying competition, has spurred technological diffusion and the adoption of new forms of work organization.” (ILO, 1999: 33)

However, not all lower-income countries see an increase in skills demand. Not all low-income countries have achieved rising technology imports and therefore an increased demand for skills. Nor will skills alone suffice to spur development. This is evident in the formerly centrally planned economies of the former USSR, where the high levels of education of the labour force were not associated with technological dynamism (O’Conner and Lunati, 1999: 28). Skills development should be a coherent and integrated part of comprehensive economic, labour market and social policies and programmes which promote economic and employment growth (ILO, 2000a: para. 4). The adoption of new ideas and technologies is a function of a number of domestic conditions of which the stock of human capital is only one. Other conditions include a conducive legal and regulatory framework, low hidden transaction costs (such as corruption) and conducive labour market conditions (O’Conner and Lunati, 1999).

Further, technology growth and skills must go hand-in-hand with each other through a simultaneous increase in technology imports and the skill level of the domestic labour force (Mayer, 2000: 27); one without the other is insufficient. “The coordination of such efforts is critical because investment in human capital alone will lead to diminishing returns of skill accumulation, while increased technology transfer alone is unlikely to be enduring and might have negative developmental effects from rising income inequality” (ibid.). The lesson from the East Asian experience was that rapid industrialization and skill accumulation were achieved by expansion of the education system in conjunction with a step-by-step upgrading of the skill intensity of economic activities (ibid.). Experience of East Asia shows that the availability of skills cannot catalyze growth by itself, but that lack of skills can seriously constrain growth (ILO, 1999: 132).

Thus, as emphasized by Theodore Schultz (1963), education and training enhance labour market flexibility to respond to structural changes in the economy. Countries with skills can adjust more effectively to the challenges of globalization because enterprises are more flexible and better able to absorb new technologies. The skill level and quality of the workforce will therefore increasingly provide the cutting edge in competing successfully in the global economy (ILO, 1999: 201, 203).

2.2 Unemployment and wages

To what extent does globalization lead to greater wage inequality? Trade openness, at least initially, can reduce wages and increase unemployment. As observed by Rama, the processes of job destruction and job creation are not simultaneous. During periods of trade liberalization, job destruction proceeds at a faster pace than job creation. Trade liberalization is associated in particular with job losses in formerly protected sectors. Also, while not directly connected with globalization, increased competitiveness also pushes governments to privatize State-owned enterprises and retrench redundant civil servants. Globalizers therefore tend to have high unemployment rates after launching reforms. However, these rates decline substantially over time. Rama observed this pattern even

among globalizers that could be considered as “models” in their own regions, such as Chile, Mauritius, Poland and Sri Lanka. In the long run, open economies do not appear to have higher unemployment rates. If anything, their unemployment rates are lower. Overall, however, only a fraction of the unemployed in developing countries are out of a job due to globalization. Integration with world markets is also accompanied by substantial job creation, especially in export-oriented activities, such as textiles, garments or footwear (Rama, 2003: 17, 19, 32).

Unemployment therefore contributes to downward pressure on wages. As stated in a World Bank study, trade openness reduces wages in the short run and foreign direct investment increases them (World Bank, 2002a: 104).

Dabalén, in a study of five African countries, found that wage premiums fell after trade liberalization. Wage premiums associated with having more education declined in four of the five countries covered by the study, especially for the most skilled. Trade and exchange rate reforms led, initially, to declining returns on skills. More educated people tended to work in the sectors that were adversely affected by trade and exchange rate reforms, such as import-substituting manufacturing. Public sector reform can also cause a decline in wage premiums in favour of well-educated workers (Dabalén et al., 1999: 21-23). The ILO *World Employment Report* noted a similar phenomenon. In many countries, high levels of tariff protection have protected the low technical competence of their workforces (ILO, 1999: 203).

Restructuring affects different workers disproportionately, especially those with and without skills. Economic reforms do not affect all workers uniformly. Because reforms mean the destruction of some industries and the creation of new ones, a workforce with a diverse skill mix will have diverse experiences. Those with more adaptable skills will be absorbed into the new industries, and those with obsolete skills laid off.

In theory, wage inequality should narrow as a result of trade openness in developing countries. In a context of free trade, countries tend to use their most abundant domestic resources intensively. Countries with abundant unskilled labour (for example, large low-income countries) would be expected to concentrate on agricultural and manufacturing goods which require unskilled labour. This would lead to an increase in demand for unskilled labour and a consequent reduction in wage inequality (Mayer, 2000: 26).

However, paradoxically, the opposite seems to be true. In countries with surplus labour, the employment of unskilled labour can increase without necessarily leading to a rise in real wages (ibid: 27). Most of the evidence on wage inequality is from middle-income countries in Latin America. This evidence points to a rapid improvement of the wages of skilled labour and a reduction, or lack of growth in wages for workers excluded from modernized production. In Costa Rica, trade liberalization led to an increase in the relative demand for more skilled workers. Trade integration was accompanied by acceleration in the introduction of best-practice technology, which requires skilled labour. In Colombia, evidence shows that trade liberalization raised wage dispersion. In Chile, the earnings gap between college graduates and workers with primary education increased with openness (as reported in Rama, 2003: 8). Research in Mexico has observed rising skill premiums in Mexican industry during the period of rapid liberalization from the mid-1980s. Two separate factors were at work. The cost of capital goods was reduced and, given capital-skills complements, this increased demand for skills. On the other hand, the reduced costs of imported consumer goods formerly produced in Mexico with labour-intensive methods

has forced domestic companies to move to more skill-intensive methods (O’Conner and Lunati, 1999: 30). Even South Africa, with abundant unskilled labour, has surprisingly tended towards capital-intensive (and presumably skill-intensive) growth (ILO, 2000b: 10).³

Some limited evidence from Africa also shows increased inequality between skilled and unskilled workers. Wage inequality narrowed in one country, stayed the same in another and widened in three countries. In Côte d’Ivoire, the wage differential between the most skilled and the least skilled increased from 46 to 60 per cent. In Uganda, large changes occurred at the extremes (between the 90th and 10th percentiles). As an example, the gap between the most skilled and the least skilled increased by 80 per cent between 1992 and 1996. Several possible reasons explain why inequality increased in these countries. According to Dabalén, the increase in inequality in Uganda was caused by a significant accumulation of skills and education by some workers. In Zambia, the increase in overall inequality stemmed from the fact that the wages of the most skilled workers declined by less than the decline in the wages of the least skilled workers (Dabalén et al., 1999: 26-27).

The main explanation for increased wage inequality has to do with the initial distribution of education and skills in the economy. With an initially skewed distribution of education, an increase in demand for skills can lead to greater inequality in wages. As stated by Kohl, the two primary determinants of how globalization affects inequality are a country’s distribution of human capital and its labour market system. The more unequal the distribution of skills and the more rigid the labour market, the more likely that globalization will increase wage and income inequality (Kohl, 2001: 1). “What matters is the degree of skewedness of the initial educational distribution” (O’Conner and Lunati, 1999: 24). In Latin America, due to extreme inequities, global integration has further widened wage inequalities (World Bank, 2002a: 5). In addition, some explanation for wage inequality may also be found in rigid and inflexible training supply which is unable to respond swiftly to shifts in skill demands.

In general, integration with global markets raises returns on education and skills (World Bank, 2002a: 19). Carnoy reports that globalization has helped to increase the relative returns on higher education (1999: 27). As Rama has shown, the returns on education increase in the context of globalization because of the relatively higher demand for skills. A systematic analysis of the relationship between openness indicators and returns on education confirms that globalization does increase the wage gap between skilled and unskilled workers, at least in the short run. Based on data from over 300 studies on the returns on education in developing countries, an extra 1 per cent of GDP in foreign direct investment raises the premium associated with an additional year of education by almost 0.8 percentage points. This is equivalent to increasing the wage gap between a college-educated person and a worker with primary education by roughly ten percentage points (Rama, 2003: 11). These effects will be offset over time by an increase in the supply of educated workers.

³ However, the most dramatic aspect of globalization in recent years has been the “China effect”. With large reserves of cheap unskilled labour, the mass arrival of Chinese products may have swept away the demand for unskilled labour in most of Latin America (Rama, 2003: 9).

Thus, an increase in the demand for skilled workers as a result of trade openness, technological change and changes in work organization can translate into greater income inequalities where skills are in short supply (ILO, 1999: 48-51).

Increased wage premiums for skills are not necessarily a bad thing. As Mayer has pointed out, a rising wage differential provides greater incentives to individuals to invest in education and skills development and thus supports the virtuous circle of technology and skills upgrading from the supply side of skill accumulation (Mayer, 2000: 25).⁴

Along with a shift in demand for labour towards the higher skilled occupations, there has been a polarization of jobs in some countries at the two ends of the technology spectrum (for example, in the United States). The polarization in labour markets is evident in the low wages and worsening unemployment of the less skilled (ILO, 1999: 52).

2.3 Migration and the brain drain

In theory, under the effect of globalization, wages should converge over time between countries and skills should be paid the same regardless of country. In fact, the current extreme gap between wages for skilled personnel between advanced and developing economies provides a powerful magnet for migration from poor to rich countries. The one market in which poor nations have something in abundance to sell, namely labour, has remained relatively untouched by international liberalizing trends (Rodrik, 2002: 5). The exceptions are for highly skilled workers, especially in information and computer technology. The United States and the United Kingdom, as well as other countries, have relaxed rules to allow the in-migration of specific categories of skilled or “knowledge” workers. It has been reported that 38 per cent of the professional workforce in Silicon Valley is of Indian origin (Yusuf, 2001: 22).

Migration has distinct benefits. The option to migrate further augments the worth of skills and investment in their creation in developing countries (Yusuf, 2001: 39). It may act as a pressure valve to relieve unemployment among professionals and technicians in economies that have not grown. Emigrants tend to return sizeable amounts of foreign exchange in remittances. Moreover, the diaspora can become a force for development in home countries through investment and the skills brought by returning migrants, which can be invested in local enterprises. This has happened particularly in the Republic of Korea, Taiwan (China) and China (Yusuf, 2001: 22; IMF, 2000).

One region in particular, sub-Saharan Africa, has suffered a considerable brain drain and has been able to draw less on its human resources employed in industrialized countries. The region has reportedly contributed 30,000 Ph.Ds and 250,000 people with advanced technical qualifications to the North (Yusuf, 2001: 23; Ajayi, 2001: 4; World Bank, 2002b: 18). This reflects the inability of many African economies to provide the wages, research

⁴ Some observers have attributed Sweden’s poor economic growth during the 1980s and 1990s to the small wage differentials relating to educational/training qualifications in the 1970s and 1980s. This gave little motivation and incentive for individuals to invest in their own learning and training.

and development that would keep highly educated and skilled workers in the region.⁵ The brain drain occurs between continents, generally from South to North, and in particular from South Africa to Europe.⁶ It also happens within Africa. For example, South Africa is able to attract large numbers of the best educated and skilled workers from neighbouring countries. This can drain human resources from poorer countries. Not only do the sending countries lose their investment in the education and skills of those who emigrate, but they are also deprived of their contribution to economic productivity.⁷ However, over time semi-skilled and skilled jobs should be transferred from advanced countries to less developed countries, and this could help minimize the wage gaps that currently act as a stimulus for migration.

3. Globalization and adjustment in Africa:⁸ The role of skills

African countries have not been deeply involved in globalization so far, at least in terms of direct foreign investment. Sub-Saharan Africa reportedly only receives about 1 per cent of global foreign direct investment⁹ (World Bank, 1999a, 145). Africa's trade is concentrated in a narrow range of primary commodities and, within this range, its market share has been shrinking. Africa's share of world exports declined from 5.3 per cent in 1960-69 to 2.3 per cent in 1990-98 (Ajayi, 2001: 3). Several major factors have impeded Africa's success in globalization, including climate, war and civil unrest, high transportation costs (Sachs, 1998: 4), low levels of education and health status (including the prevalence of HIV/AIDS), the unfavourable investment climate, the limited size of its economies (Soderbom and Teal, 2003), high transaction costs and the lowest teledensity and fewest computers of any region (Ajayi, 2001: 5-6). Except for Mauritius, no sub-Saharan African country has been able to develop manufacturing exports rapidly (Soderbom and Teal, 2003: 15).

In contrast with the limited amount of foreign direct investment, many African countries have undergone major programmes of structural adjustment. These have included the liberalization of capital, produce and labour markets, and the promotion of competition in the economy. In addition, adjustment programmes typically call for sharply reduced government spending to lower public deficits, lower consumer subsidies, the elimination of

⁵ "Without a viable strategy for creating 'value added' companies based on quality, it will be difficult to increase investment in education, training, research and technological innovation. There will be little scope or incentive to increase the demand for skilled workers." (Brown et al., 2001: 36)

⁶ "South Africa invests heavily in higher education, only to find that many of its best students go abroad to Europe once trained. On the other hand, increasing numbers of highly skilled Africans from other countries attempt to come to South Africa for further training and to work. The 'brain drain' ... may be accentuated in a global economy." (Carnoy, 1999: 25)

⁷ The problem of the brain drain has prompted various calls for embargoes and restrictions on emigration, including an exit tax. A more realistic proposal was made by Adrienne Bird of the South African Employment and Skills Development Services at the ILO's Global Employment Forum in 2001. She proposed that to "avoid the increasing brain drain from developing countries, there must be an agreement on good international recruitment practices".

⁸ References to "Africa" in this paper refer to sub-Saharan Africa.

⁹ Jenkins and Thomas (2002) report that SADC's share of total FDI to developing countries is less than 3 per cent. FDI is low, inter alia, because of the limited size of local markets.

price controls, the introduction of user charges and the privatization of State-owned enterprises. “The assumption is that as adjustment programmes start to bite, enterprises would adapt to the new regime, introduce new technologies, new methods of organizing production and work and endeavour to seize new markets domestically and abroad. In the adjustment process, new economic sectors will emerge and grow, while others will contract. Training is an instrument that is expected to facilitate this adjustment process.” (ILO, 1998: 122).

“Adjustment and technological transformation are expected to change skill demand by enterprises and the economy. In addition to new technical skills brought about by new technology, competition and export orientation will generate the need for genuine managerial skills and entrepreneurship – as opposed to administrative skills to run state enterprises -, team work skills, marketing skills and trainability and adaptability to continuous change. Resources, be they human or capital, cannot normally be reallocated quickly and without friction. Investment in plant and equipment and in educating and training the workforce become essential for expansion of newly profitable activities.” (Ibid.)

Some observers feel that “adjustment has been compromised by the inability of education and training institutions – and enterprises – to adjust their programmes to the demand for new skills brought about by changing trading patterns, technologies and managerial practices. According to this view, inertia and inflexibility of training programmes and poor knowledge about the evolving labour market combined with insufficient resources are largely to blame for the mismatch between the demand for and supply of skills and training (Ibid: 123).

Before analysing supply problems in African training systems, it is important to consider skill demands. In addition to the factors explained above which affect skill demand (i.e. complementarities between human capital, physical capital and technology), HIV/AIDS is expected to have a major impact on skill demand in Africa. Almost 30 million Africans carried HIV/AIDS in 2002 and about 3.5 million new infections occurred that year (UNAIDS, 2000). The full impact of HIV/AIDS has not yet been felt in high-prevalence countries owing to the long lag between infection and the onset of AIDS. In the eight African countries where at least 15 per cent of adults are infected, the size of the labour force is projected to be between 10 to 30 per cent smaller by 2020 than it would have been without HIV/AIDS. The number of employees lost to AIDS over the next decade could be equivalent to 40-50 per cent of the current workforce in some South African companies. AIDS depletes scarce human capital and magnifies the need to replace skills across a wide range of occupations. The direct impact in companies is manifest, inter alia, in staff turnover, skill shortfalls and high retraining costs. Among other outcomes, the pandemic is expected to result in a much younger, less experienced labour force, with significantly less opportunity for mentoring or training on the job and reduced incentives for investment in training due to the curtailed life horizon. Empirically well-grounded studies are lacking on the impact of AIDS on skills (apart from teachers or health workers), but clearly already weak and overburdened systems of skills formation will be placed under further stress.

How are African training systems adapting to the new economic challenges brought about by adjustment, liberalization and competition? Organized training supply can be viewed as consisting of four principal components: institution-based training provided by public and

non-governmental institutions, and enterprise-based training provided by formal enterprises and firms in the informal economy. Each of these sources of training supply is discussed in sequence below, along with the financing of training.¹⁰

3.1 Public training systems¹¹

3.1.1 Assessment

Public training systems have had difficulties in responding to a changing economic environment. Close linkage with the labour market is the most important requirement for a relevant, or externally efficient training system. Public training in sub-Saharan Africa tends to be limited in scope, imbalanced in provision and often oriented to jobs that no longer exist. Central examinations, themselves out of tune with the labour market, tend to reinforce these distortions. Technical vocational education and training (TVET) generally occupies a small, if not marginal, position in the school systems of sub-Saharan Africa. Formal TVET in many cases fails to deliver skills for jobs that exist in the informal economy. It tends to be offered almost exclusively for pre-employment training in skills for wage employment. However, this type of employment has almost entirely collapsed in many countries.

Management of TVET is typically shared by various government bodies, including ministries of education, ministries of labour or even separate ministries for vocational training in some French-speaking countries. Such diverse management accountabilities make training delivery complex, lead to duplication of effort, generate segmentation of training supply and do not permit mutual recognition of credentials. More important, the accountability of TVET to one or more government ministries often results in training provision that is largely isolated from market forces, subject to centralized curriculum decisions that change only slowly and circumscribed by limited institutional autonomy. African ministries have long managed TVET without entering into a particular relationship with the economic environment and the world of work.

Formal TVET has been slow to respond to the changing needs of the labour market. An example is the difficulty that Mozambique has experienced in retooling its training system from an overly specialized and outdated curriculum designed for a formerly centrally planned economy and employment in large State-owned companies. The Government's own critique of TVET points to weak relationships with the world of work, the absence of firms in the management of training and the lack of feedback from the world of work. In Zambia, public institutions have perpetuated the occupational training curricula and certification schemes introduced in the 1960s for a very different economy. One of the most obvious deficiencies of TVET systems in French-speaking countries is their neglect

¹⁰ The following analysis is taken largely from a three-year review by the World Bank of training in Africa, as reported in Johanson and Adams (2003) (used with permission). The review is based on a series of 14 thematic studies, which include 20 country reviews and 64 case studies. These, together with an earlier version of the above report, can be found at the World Bank website - www.worldbank.org (follow Social Protection > Labor Markets > Vocational Education and Training > Vocational Skills Development in sub-Saharan Africa).

¹¹ See also Atchoarena and Delluc (2002).

of the informal sector. African training systems are also characterized by centrally developed curricula and rigid, lengthy institution-based training with little or no provision for adaptation to local needs. TVET systems tend to be certificate-led rather than employment-led. In Uganda, adherence to centralized curricula seriously hampers the flexibility of training providers to adjust their courses to developments in the economy and changes in the labour market.

Tracer studies, where available, provide evidence of the absorption of TVET graduates into employment. Post-training impact is not often tracked through tracer studies, but some do exist. In Tanzania, Mali and Madagascar, the employment rates of TVET graduates were only 14, 44 and 45 per cent, respectively, in the 1990s. Other studies report better results for training systems in stronger economies. In the early 1990s, the employment rate for artisans was 70 per cent in Zimbabwe and 80 per cent in Mozambique's rapidly growing economy. In many countries, the civil service has been a major employer of VET graduates. In the late 1990s, some 90 per cent of terminating technical school graduates in Eritrea were employed, but 70 per cent of them found work in the public sector. The downsizing of public sector employment as a result of structural adjustment has reduced or eliminated the public service as a channel for graduates of vocational training in many countries.

Sharply curtailed public budgets for training have limited the capacity of training systems to respond flexibly to changed economic circumstances. Severe decapitalization has occurred in public training systems throughout the region. The decay in the public provision of training is evident in the lack of equipment for information technology courses and automotive workshops in Kenya. The National Industrial Vocational Training Centre, in the heart of the largest industrial area in Eastern Africa, is a shadow of its former self, with little refurbishment or replacement of machines dating back to the 1970s. Recurrent budget reductions have also reduced the qualifications, pay and motivation of teaching staff. Many governments now restrict their financing to staff salaries, leaving nothing for supplies and maintenance of facilities. This has had disastrous effects on the quality of skill acquisition. Budget reductions make it more difficult to change and upgrade training programmes. Nevertheless, in the face of shrinking public budgets for training, institutions such as those in Ghana have maintained their high-cost structures implicit in centre-based training delivered in long courses with fixed entry points.

3.1.2 *Reforms in organization and management*

Can public training systems be reformed? There is no simple answer here. The history of vocational training reforms is littered with failures. Existing vocational schools may be too rigid, underfunded and weak to be redeployed according to rapidly changing economic circumstances. Yet a new policy agenda has emerged in Africa, largely influenced by the sharp critique of state-sponsored TVET systems. The new approach is built around the principles of reduced public involvement in training provision, partnership in governance and increased reliance on market mechanisms. Ministers in French-speaking countries in the region have developed a comprehensive framework for reforming TVET systems that is remarkably well-targeted at current weaknesses in skills development. However, little has yet been done to implement these policies due to institutional and political inertia. English-speaking African countries have adopted more radical lines of intervention, including levy systems, attention to the informal sector, entrepreneurship and national qualifications systems.

Some examples exist of well-conceived comprehensive reforms of training systems in Africa. Perhaps the most well-known are those in South Africa, conceived and implemented in the latter half of the 1990s. An overall human resource development council was created with advisory functions for skills training. Sectoral Education and Training Authorities (SETAs) are being created from former industrial training boards. SETAs are funded from the proceeds of a compulsory 1 per cent payroll levy on enterprises, of which 80 per cent goes directly to skill development funds managed by SETAs. These funds are disbursed as grants to firms that carry out accredited training that meets criteria linked to the sectoral skills plan. The remaining 20 per cent are allocated to the new National Skills Fund for a variety of activities, including those for micro- and small enterprises and poor and vulnerable groups in society. This amounts to the cross-subsidization of training by enterprises.

In the early 1990s, Tanzania undertook its own reform of public TVET. This involved the creation of the Vocational Education and Training Authority (VETA), the transfer to it of all public vocational training institutions and the establishment of a 2 per cent payroll tax to finance training. Labour market analysis units were created within a decentralized structure. More recently, competency-based training has been introduced. The changes succeeded in salvaging public training from severe financial crisis, but too little financial support has been extended to the non-public training institutions that constitute the majority of providers. Moreover, employers complain that support concentrated in public pre-service training does not address their particular training needs, and too few employers are involved in the governance of the central training agency.

Reform of the Zambian training system is a third example of system-wide reform. Starting with an analysis undertaken in 1994, an autonomous National Training Board has been created for policies, standards and evaluation. Training institutions have been given autonomy and delinked from the civil service (these reforms were made possible by broader structural adjustment measures, including the downsizing of the civil service). All training institutions, public and private, now undergo annual inspections against objective criteria. Interestingly, no public institution achieved the top rating (1 out of 3) in the initial evaluations, and one government institution was closed for failure to improve its standards. The introduction of a payroll levy has been authorized, but deferred because of opposition from employers. Instead, a training fund is being financed by international donors.

These system-wide reforms indicate some of the key aspects of change within African training systems. First, a clear trend exists towards the establishment of national coordination or consultative bodies to govern training systems. The establishment of national consultative bodies reflects new thinking in public policy, advocating partnership as a key principle for increased effectiveness and accountability in public management. Partnership promises to achieve a high degree of efficiency in the use of public money by making TVET more responsive to employment. The new trend in governance takes the form of coordinating councils, national training boards and national training agencies. In addition to the cases of Tanzania, Zambia and South Africa, described above, other examples include the Industrial and Vocational Training Board (IVTB) in Mauritius and the National Co-ordinating Committee for Technical and Vocational Education (NACVET) in Ghana. Two main lessons can be derived from these experiences. National training authorities must be vested with real authority. Consultative organizations tend to be toothless and do not radically improve things unless they can make decisions and control resource allocation. Moreover, balanced representation is critical for success, and especially giving sufficient weight to employer representation. In Tanzania, only two employers sit on the eleven-member board of the Vocational Education and Training

Authority (VETA). This contrasts with Madagascar, where the highly effective *Centre National de la Formation Technique et Professionnelle* (CNFTP) has an employer majority (ten out of twelve members).

An emerging consensus favours increased autonomy for training establishments.¹² Devolution of authority means allowing training institutions to administer themselves and keep the funds that they raise through fees and production, as well as forcing them to find their own markets for the employment of graduates. This breaks the long decision-making circuits in centralized systems that militate against dynamic relations with the labour market. Relationships between training centres and enterprises are easier to promote at the local level¹³ (see Box 1 on Zambia).

3.1.3 Training delivery

Several innovations can be seen in training delivery. Training institutions, particularly in French-speaking Africa, have been expanding the scope of their activities, in effect transforming themselves from narrow pre-employment training into multi-purpose service institutions. Continuing education or job-related vocational training as a paid service has been added to the provision of formal technical vocational education. Evening classes or second shifts are started for students recruited on a fee-paying basis in public institutions. In Mali the creation of the Units for Training and Support to Enterprises is one of the most advanced examples of the introduction of continuing education.

Information and communication technologies (ICT) also offer a vast potential, as yet mostly untapped, for skills development. ICT can be used partly to expand the quantity of education and training at lower unit costs through distance teaching, and partly to deliver higher quality (at higher cost) through computer-assisted instruction and the use of the Internet (Carnoy, 1999: 17). The possibilities of applying ICT to adult lifelong education and training are much greater than using it in traditional schools, particularly in the lower grades (Ibid: 74-5). In the area of TVET, videos are increasingly being used to conduct technical training courses in several advanced countries in the region. Other applications are possible, including the delivery of training courses via e-learning. These examples raise the hope that Africa can “leap-frog” several stages in the development process to spread high-quality training widely at low cost.¹⁴ However, formidable problems need to be overcome in terms of infrastructure, instructional content and delivery systems. The most likely new application of ICT would be in formal technical education where existing correspondence programmes form a basis (for example, Telisa in South Africa). Training

¹² Carnoy argues that the decentralization of education systems only works if carried out simultaneously with increased public spending, especially for poor localities and low-income schools (1999: 56).

¹³ “Subsidiarity” means to “facilitate decision-making at the lowest possible levels (...). In economic terms subsidiarity is desirable because the knowledge to make sound investment decisions linked to skills upgrading requires a detailed understanding of local companies, labour market conditions, and training provision at the local level.” (Brown et al., 2001: 45)

¹⁴ However, there is also a “danger that these technologies may create a digital divide and worsen existing inequalities in education and training between urban and rural areas, between rich and poor, between those who possess and those who lack literacy and numeracy skills and between developed and developing countries.” (ILO, 2000a: para. 13).

video tapes and disks, which are not excessively costly to produce and can be borrowed from more advanced countries, also offer potential where electricity is reliable, players can be afforded and training sites are secure.

3.1.4 Standards and certification

Another class of innovations pertains to occupational standards, testing and certification, usually based on concepts drawn from industrial countries. Some countries are moving away from formal examinations to a process of continuous assessment of the specific competencies acquired. One form of this trend manifests itself in the development of national qualification frameworks (NQFs), which are being adopted by Botswana, Ghana, Mauritius, Namibia and South Africa. The Southern African Development Community (SADC) views NQFs as an important element in increasing labour competitiveness and mobility in the subregion. NQFs are in essence comprehensive and hierarchical standards for proficiency in a wide range of occupations. They offer several advantages, including facilitating labour mobility¹⁵ and labour market efficiency, stimulating individuals to continue their training, and focusing cost-effectively on outcomes regardless of how the skills are obtained. South Africa is using occupational standards and certification as a means of equalizing opportunities for black Africans. This equalization takes place through the recognition of prior learning for those who have obtained their qualifications mostly through on-the-job training.

The implementation of NQFs is not yet complete even in the countries where they originated, namely Australia and the United Kingdom. The NQF system has been criticized in the United Kingdom as possibly contributing to de-skilling because of a narrowly defined concept of competences, based on the performance of elementary tasks, rather than a wider range of comprehensive skills and knowledge. The application of NQF models from advanced countries may be problematic in Africa because of the different, much weaker, educational, economic and institutional environments. The South African experience has been a complex, bureaucratic and slow process. The success of any reform depends on inter-relations between the complexity of design and implementing capacity. Little is known about the costs of developing and maintaining qualification criteria, although the cost of both the development and maintenance of NQF systems is thought to be substantial. For poor African countries there is clearly a trade-off between introducing relatively expensive NQFs and actually providing training.

A more realistic reform for most countries in Africa may be the establishment of competency-based education and training (CBET) systems. Competency-based training shifts the emphasis from what courses a trainee has taken and for how long to what the trainee can do. CBET training is usually modular and facilitates flexible entry and exit points and recognizes different routes of skills acquisition. The value of CBET is that it focuses on the skills needed for performance in a job rather than paper credentials, and holds instructors and the management of the centres more accountable for the delivery of these skills. However, implementation is complex and rigorous. Zambia and Tanzania, among others, are in the process of introducing CBET systems.

¹⁵ “By having an externally validated and moderated certificate the state (in the UK through the NQF) seeks to ensure that skills can be transferred from one company to another.” (Brown et al., 2001: 192)

3.2 Training finance¹⁶

Numerous reforms and innovations are also taking place in the financing of training. Resource mobilization has to be an integral part of national training policy in view of the limitations on public financing. It needs to be matched with initiatives to improve the efficiency of existing expenditures on skills development. The past decade has shown increased diversification of financing for skills development and a movement towards new instruments that shift financing to the demand side of training markets, thereby promoting accountability for performance. The modalities of financing TVET are perhaps the most important instrument for promoting sectoral reforms because of the incentives they provide.

3.2.1 Resource mobilization

Investing in education and training should be a shared responsibility of both the public and private sectors. Government has the primary responsibility for investing in basic education and initial training, and also for poorer and disadvantaged segments of the population (ILO, 2000a: para. 11). However, increased public financing is constrained in most countries by budget cuts imposed by limited government revenue, slow growth and structural adjustment (reduction of public sector deficits). Limits on public financing make it necessary to search for alternative, non-governmental, sources of revenue. Five options exist for mobilizing additional resources for skills development: payroll levies on employers; tuition and other fees paid by enterprises or trainees and their families; the production and sale of goods and services by training institutions; community support and donations; and, indirectly, the expansion of non-governmental provision. Tax credits or the deduction of expenses can also be used to encourage spending on training by enterprises and households, but the outcome largely depends on the efficiency of tax administration and the presence of income to be taxed, which tends to reduce effectiveness in the informal sector.

Training levies are used in twelve countries in sub-Saharan Africa to provide a stable source of financing for skills development, but not without problems. These problems include: non-compliance by employers (Tanzania), particularly among smaller enterprises; the diversion of resources to non-training uses (Gabon, Gambia, and previously Côte d'Ivoire and Togo); and the potential generation of surpluses, leading to misuse (Zimbabwe, and previously Mauritius). The weakness of this source of financing lies in the limited modern sector industrial base in most of sub-Saharan Africa.

Tuition and fees have expanded for skills development. Such fees currently cover up to one-quarter of recurrent costs, but vary with the type and cost of the training, the willingness of clients to pay, political constraints on cost sharing and social equity policies. Where fees are used, targeted public financing can help provide access for the poor.

The sale of goods and services produced by training institutions has increased revenues for skills development. Finding the right balance between training and production is important

¹⁶ Based on Zideman (2001).

in ensuring that undue focus on production does not reduce the quality of training and lead to the exploitation of trainees. This balance can be retained where up to 15 per cent of total revenues are from this source at the institutional level.

Actions to remove barriers to entry and to expand non-governmental sources of skills development promise to bring additional private resources to the market. In some cases, communities are also willing to sponsor training institutions.

In combination, these sources can reduce pressure on public spending for skills development. Supplementary financing is not expected to replace public financing completely, or even mainly, particularly where equity issues apply. What is important is building a financing strategy that combines these sources to create a mix of public and private financing for skills development. Incentives in this respect are enhanced where local institutions are able to retain the additional revenues generated for use in achieving quality improvements.

3.2.2 *Financial allocation mechanisms*

The manner in which funds are managed and training procured influences the behaviour of training institutions and the outcomes of skills development. Allocation mechanisms for training resources are a powerful means of helping the training system become more market-responsive and efficient.

One allocation mechanism, the use of training funds, has now been adopted in 21 countries in sub-Saharan Africa. The funds in Côte d'Ivoire and Madagascar have been particularly effective. Training funds encompass resources from government budgets, training levies and donors. These funds afford an opportunity to level the playing field for all providers by procuring training for target groups on a competitive basis. This encourages cost-effective delivery. Characteristics of effective training funds include: transparent rules for allocation; good governance with employer and worker representation; sound management; effective targeting instruments; regular monitoring and evaluation of training results; and attention to fiscal sustainability.

An expansion of cost sharing increases consumer interest in the quality of training, including its relevance and cost-effectiveness. The empowerment of consumers through training vouchers can lead to an expansion of training supply from the different provider groups, more choice for trainees, increased relevance and cost reductions as a result of competition. However, vouchers have proved complex to implement and control financially and may not be adapted to the African context, where low administrative capacity is an issue.

The use of budgeting norms and performance criteria holds out promise for the improvement of training outcomes and is especially relevant in reshaping incentives and accountability for State-sponsored training. Financing norms can be established based on: inputs, such as the number of trainees enrolled; outputs, such as course completions; and outcomes, for example job placements. Combinations of these norms could be feasible in most African settings, provided that reliable measurement criteria and adequate

information systems are developed, results are reported candidly and the political will exists to resist the vested interests that may lose from their application.

In countries with a training levy, the proceeds can be returned to enterprises as a grant for training in proportion to their contribution to the levy or redistributed among enterprises that choose to provide training. The levy-grant system operates in eight countries in Africa, including Côte d'Ivoire, Kenya, Nigeria, South Africa and Zimbabwe. Levy-grants encourage efficient enterprise training and reduce demand for public spending but, like vouchers, require administrative capacity for the evaluation of grant proposals and the monitoring of results.

Allocation mechanisms for procuring training services vary in complexity and administrative requirements and need to be tailored to local circumstances. The importance of these mechanisms is the incentive framework they provide for improving the quality, cost-effectiveness and relevance of training. These incentives can be applied to all providers and create a level playing field for competition. Mechanisms such as training funds, vouchers and even budget performance criteria can also be used to achieve social equity objectives.

3.3 Private (non-governmental) training¹⁷

One of the main findings of the World Bank's review of skills development was the identification of the extensive scope of non-governmental training existing in many countries in the region. The non-governmental training sector is highly diverse in ownership and purposes. It includes non-governmental organizations (NGOs), religious-based providers and for-profit trainers. It is more than the sum of those seeking profit and includes many pursuing social objectives to reach the disadvantaged and poor with skills development. These institutions are an important and growing source of the supply of skills in sub-Saharan Africa. In many cases, non-governmental provision eclipses the training supply from public sources. For example, in Mali, non-governmental training makes up two-thirds of all TVET, 90 per cent in Tanzania, 82 per cent in Zambia and 80 per cent in Zimbabwe. Bennell found that private sector education and training was a "mass phenomenon" in Zimbabwe and estimated that at least 180,000 persons received training from private sector training institutions, or 5 per cent of the economically active population (Bennell, 1998: 37-38).

Reliable information on the scope and performance of non-governmental training is difficult to obtain in most countries. This is a gap that needs to be filled to improve understanding of training markets and define the role of government in the provision and financing of TVET. The limited information available from surveys in a small number of countries suggests that non-governmental providers are more responsive to markets and reflect lower instructor cost, more intensive use of facilities and larger class sizes.

For-profit trainers tend to be well attuned to the market and often provide a substantial amount of training for women in traditional areas of employment. These enterprises are

¹⁷ Based largely on Atchoarena and Esquieu (2002) and Kitaev (2002).

often located in urban centres, less frequently in rural communities, and focus on a narrow range of skills that are relatively inexpensive to produce, such as information technology, commerce, sewing and tailoring. Non-governmental organizations and religious institutions serve a wider array of social objectives in reaching the disadvantaged, but tend to be less well-connected with markets and employment.

Variance in the quality of training offered is high among non-governmental providers. Interventions to inform consumers about differences in quality are appropriate. However, government capacity to regulate providers is weak in most countries and over-regulation with a view to controlling quality can establish barriers to entry. Providing information to clients about the performance of individual institutions is an effective form of consumer protection. Government monitoring of performance can provide this information, but so can support to associations of trainers to set standards voluntarily and enforce these standards.

Government and non-governmental providers of skills development tend to serve different market segments, but where overlaps occur this opens opportunities to redirect public financing more strategically to fill gaps left by non-governmental providers. Analysis of these markets is necessary to build this type of partnership and define its limits. In identifying barriers to expanding non-governmental provision, providers mention lack of start-up capital, access to land and the capacity of trainees to pay. Public financing to lower these barriers can replace the need for public provision.

3.4 Enterprise-based training in the formal sector¹⁸

African enterprises also provide training and are an important component of supply in training markets. The results of a World Bank research project in the late 1990s, using a large sample of enterprises from the manufacturing sector for wage employment in five countries, show that these enterprises train at rates equal to or greater than those of enterprises in other regions (Biggs et al., 1995).

Enterprise-based training is largely self-financing, self-regulating and cost-effective. It occurs without much government help, apart from any tax benefits that may exist in specific countries. The economic benefits of such training are substantial in terms of wage growth and value-added per worker. At the enterprise level, worker training can raise productivity significantly. All the learning mechanisms used by enterprises have been found to have an unambiguously positive impact on the productivity of the enterprise.¹⁹ Among these mechanisms, on-the-job training of workers, inside and outside the enterprise, has been found to have the largest relative impact on value added by companies. Training has a high impact even in relatively low-skill companies and very small companies. Worker training is even more important for firm productivity and growth

¹⁸ Based on Biggs et al. (1995), Dabalen et al (2003) and Gierson and King (2002).

¹⁹ Such mechanisms include training workers in and outside the firm, internal research and development, hiring expatriates, external access to foreign buyers and suppliers, interaction with other companies, technology transfer from abroad through technical assistance contracts or licensing arrangements, foreign ownership and exports (Biggs et al., 1995: 52, 207).

than access to working capital. If the percentage of total workers being trained by firms were to increase by one point from its sample average of 9 per cent, value added would increase by 60 per cent for the sample as a whole and 99 per cent for small enterprises²⁰ (Biggs et al., 1995: 54).

Using the same survey data, more recent calculations show that workers also benefit from training through wage premiums. Training was estimated to increase wages by at least 15 to 21 per cent. Statistically significant estimates show the returns on training in African manufacturing in the form of individual wage increases ranged from 19-37 per cent in Ghana; 15-21 per cent in Kenya; 16-81 per cent in Zambia; and 20-70 per cent in Zimbabwe (Dabalén et al., 2003: 4.3).

As found worldwide, larger enterprises train more than smaller enterprises. The difference is greater for formal modes of training than informal on-the-job training. The latter is available in most firms, both large and small. However, the rate of formal training in enterprises with over 150 employees can be ten to 20 times higher than in smaller enterprises with ten or fewer workers.²¹ Not surprisingly, enterprises which produce for export and are foreign-owned train formally at two to three times the rate of domestically owned firms. Nevertheless, access to the training offered is selective and, if not compensated in other ways, will lead to higher income inequality over the lifecycle of workers. Those trained in enterprises tend to have more education and higher occupational status than those not selected for training. Thus, those who were fortunate enough to secure education early on continue to enjoy this advantage at later stages of their life through further access to training, leading to increased productivity and incomes.

In view of the extensive training that takes place within enterprises, mostly without government intervention, no blanket justification exists for general subsidies for skills development, at least among larger enterprises that are active trainers. The argument can be made that present levels of training in these enterprises may still not be optimal in economic terms and the economic returns on training should be investigated. The case may be stronger for public subsidies in smaller enterprises, where the high cost of time away from production can lead to under-investment, as can a lack of information about the benefits of training.

Like State-sponsored and non-governmental training, the training market served by enterprises is segmented. Reliance on any of these providers alone is likely to leave gaps in the provision of training. Reforms over the past decade using training funds as an intermediary to encourage enterprise training and help overcome the high transaction costs for smaller firms merit further use and targeting upon smaller enterprises.

²⁰ Another World Bank study covering Colombia, Indonesia, Malaysia, Mexico and Taiwan (China), based on a survey of firms, shows that training is associated with higher firm-level productivity in all five countries (Tan and Batra, 1995).

²¹ As observed by Brown et al., "It is small and medium-sized enterprises that are expected to generate the majority of new employment opportunities, but because of their size and limited resources they are restricted in their scope to upgrade products and services, along with the skills of their workforce." (2001: 45)

3.5 Skills in the informal economy²²

The informal economy is not commonly regarded as significant for globalization. Rama, for example, states that “the informal sector (...) is not directly affected by exposure to world markets” (Rama, 2003: 32). However, openness directly impacts the informal economy in several ways. It has been assumed that structural adjustment will benefit enterprises in the informal economy by reducing the productive reach of the State, limiting bureaucratic rent-seeking and allowing access to cheaper imported intermediate goods. However, there have been criticisms about the saturation of the small enterprise sector due to downsizing in the public sector and larger firms and the dumping of imported, often second-hand goods (Afenyadu et al., 1999: 4). Lazo (2001) also points to the major impact that job losses due to trade openness and structural adjustment have had in pushing people into the informal economy and overburdening already over-saturated markets. For example, a reduction in tariff prohibition on importing second-hand clothing resulted in the undercutting of small-scale tailoring businesses in several African countries and reportedly wiped out traditional clothing manufacturers in some places. Haan has reported that it is becoming more and more difficult to make a living from tailoring and dressmaking skills because the importation of second-hand clothing presents an insurmountable problem for tailors and dressmakers (2001: 9.2, 9.4.1).

However, in other trades in Kenya, King (1999) found that economic liberalization had spurred a good deal of competition. Most noticeable in Nairobi was the large number of people making items such as scales, paint, soft drinks and machine tools. The view of the informal sector enterprises was that reforms had removed some of the rent-seeking behaviour of the State officials. It also meant that materials and supplies were much more available. In addition, structural adjustment was also expected to benefit small enterprises through skills transfer from larger firms. Downsizing and retrenchment from larger industry and government in some cases did lead to a new cadre of skilled entrants to the informal sector. King found evidence of this in Kenya (Afenyadu et al., 1999: 65).

The most promising areas of the informal economy are the higher end segments, including manufacturing and maintenance operations. It is of particular importance for small enterprises to be in the right niche markets. Examples of smaller enterprises in niche markets, characterized by higher value products and quality differentiation, are fashion and design in Ghana, machine tools in Kenya and African clothing in South Africa. Education and training are clearly important in such cases for the development of the skills and knowledge necessary to succeed (ibid: 19).

Traditional apprenticeship training is often the most important means of training in the informal sector, particularly in West Africa. Traditional apprenticeship training is self-financing, self-regulating and cost-effective, but it perpetuates traditional technologies and lacks standards and quality assurance. The informal economy is where most of the non-agricultural poor work and where investments in skills development, along with other complementary inputs, such as access to secure workplaces, credit and technology, can play an important role in poverty reduction, particularly for women and vulnerable groups.

²² Based on Haan (2001) and Haan and Serriere (2002).

Experience over the past decade has shown how a shift in financing to the demand side through training funds (Côte d'Ivoire) and vouchers for workers (Kenya) can elicit a new supply response for the informal sector from trainers, including non-governmental institutions and master craftworkers. State-sponsored formal training institutions have been slower to respond to incentives for this type of training. Support for the training of master craftworkers can enhance the quality of the training they offer while opening up an awareness of new technologies.

Training interventions can have an added benefit in raising productivity and incomes in micro and small enterprises by acting as an entry point for upgrading the technology of the enterprises. Interventions need to target niche markets with growth prospects and avoid saturated trades and markets, which are unlikely to yield benefits for training. The Madagascar experience of targeting training at small suppliers of intermediate goods for processing and exporting is an example of finding these niche markets (see Box 2). Market studies are needed for this purpose.

Demand for training among micro- and small enterprises in the informal sector is likely to be low and require development activities to demonstrate the benefits of skills development. Informal sector associations can be helpful in raising awareness of skills shortages among members, as well as in addressing other shared needs. Literacy or the lack thereof is likely to be an issue for skills development in the informal sector and successful examples are available of programmes combining learning for livelihoods with literacy training (Oxenham et al., 2002).

Training for the informal economy is necessarily different from the formal economy in its preference for merging technical skills with business management skills and delivering courses with a flexible schedule. The training needs to have immediate application, as the poor can hardly afford long periods of training before the pay-off becomes evident. Focusing on evaluating competencies achieved with training is important for quality assurance. Even among the poor, a willingness can be seen to pay for good training. Full cost recovery is rarely practiced, however, and subsidies for training in the informal sector can be justified on grounds of social equity and efficiency.

Donors have been active supporters of skills development for the informal sector and have shown that enterprises in the informal sector can be upgraded (Johanson and Adams, 2003: Appendices B to L). However, it remains a challenge to take these interventions to scale and sustain them. The emergence of training markets with diverse sources of supply and ready demand remains in the distance. Nevertheless, the development of these markets is possible and can be facilitated by governments.

Except at the high end of the informal economy, the strengthening of skills development for this sector will not ensure the transition of sub-Saharan Africa from abundant manual labour to skill-based competitiveness. Increased focus on skills development in the informal economy should not detract from the need to ensure a reasonable amount of high-quality training for the modern sector.

4. Conclusions and recommendations

What role can skills development play in avoiding the problems of globalization and structural adjustment and realizing their benefits? What can be done to position countries to capture the employment and wage benefits of globalization?

First, higher and more evenly distributed levels of education will help mitigate wage inequities that have been widened by globalization (Rama, 2003: 20). The 2002 World Bank study pointed out that promoting education enhances productivity growth, the main engine of poverty reduction. Strong education for the poor and a positive investment climate help empower the poor to benefit from an expanding economy. A combination of openness and a well-educated workforce produces especially good results for poverty reduction and human welfare (World Bank, 2002a: 2, 14, 20). Even the International Monetary Fund (IMF) has stated that the best way to compensate for the labour market impact caused by the rise and fall of different industries and economic activities is to invest in the human capital of the poor. “The answer is to invest in the human capital of the poor – increasing their access to health, education and economic opportunity – as well as to provide a cushion during the process of adjustment, in the form of efficient social safety nets” (IMF, 2001: 4).

However, it takes time to raise the educational level of the labour force appreciably. Cohorts entering the labour market usually form only a small proportion of the total labour force. Until new cohorts of educated workers enter the workforce, investment in additional training for the current workforce may provide a substitute, although the lower the average educational attainment, the less perfect the substitute (O’Conner and Lunati, 1999: 39). To the extent that developing countries do create conditions of technological dynamism towards progressively more skill-intensive activities, workers need to benefit from continual learning to update their skills and keep abreast of new technologies.

Investments have to be sustained for new labour force entrants. The economic difficulties of some countries can be traced in part to a lack of sustained investment in education and training. “The costs of failure to anticipate the growing demand for skilled labour as countries begin to climb the ‘quality ladder’ is evident in a country like Thailand, where the period of economic boom from the mid-1980s to mid-1990s witnessed a marked widening of income inequality. Other countries would do well to take heed.” (O’Conner and Lunati, 1999: 7)

Given that capital and new technologies are skill-intensive, worker training takes on special significance in a globalizing, rapidly changing economy. The important points are that, first, the training be recurrent or continual to update the skills of workers so as to enable them to stay abreast of new technologies. Some of this will be provided through the workplace, but much will involve the enhancement of generic skills through formal education and training (O’Conner and Lunati, 1999: 40). Second, the training must not be too narrow, because adaptability is another key to success in the modern world (IMF, 2001: 5). As stated in the ILO’s Conclusions of 2000, “[i]ndividuals are most employable when they have broad-based education and training, basic and portable high-level skills, including teamwork, problem solving and communications technology (ICT) and communication and language skills, learning to learn skills, and competencies to protect themselves and their colleagues against occupational hazards and diseases. This

combination of skills enables them to adapt to changes in the world of work.” (ILO, 2000a: para. 9)

Building capacity for lifelong recurrent training and for training for displaced workers is also an important institutional measure for globalizers. As pointed out by Brown et al., “skill is not simply a matter of acquiring technical competences through formal education and training, it also includes the ability to learn how to learn. The short life cycle of knowledge and skills make the ability to grasp new information and acquire new skills an inherent feature of skill formation in post-industrial societies.” (2001: 15)

Coping with the uncertainties and consequences of rapid shifts in exchange rates and terms of trade would suggest the following areas for development:

- more investment in general skills to make an individual flexible and adaptable to new training needs;
- introduction of just-in-time-training to accommodate frequent shifts in skill demands; and
- modes of training delivery that target adults who will be re-tooling with increasing frequency.

Supporting this process will require market information on trends and changes ahead to help planning by institutions and workers.

- Implementing reforms in training systems, as described above for several African countries, will make public training systems more responsive to the changing economic requirements stemming from openness and globalization.
- The role of government should become more strategic, concentrating on the following priorities: (a) fostering the growth and development of non-governmental training providers through partnerships; (b) promoting social equity in training markets and filling gaps where non-governmental providers fail to respond, for example reaching out to the informal sector and promoting strategic growth areas and skills; and (c) facilitating market functions not ordinarily performed by the private sector, such as policy development, setting standards, training instructors, development and dissemination of market information and monitoring and evaluation of outcomes.
- Development of training authorities based on partnership with the social partners can help involve employers more deeply in steering training systems and can help link supply more effectively with emerging labour market demands (ILO, 2000a: para. 19).
- Devolution of authority to training institutions frees them to respond more quickly to local market demands while giving incentives for local resource mobilization and self-sufficiency.
- Establishment of national qualification frameworks and competency-based training, where possible, will facilitate labour mobility and the cost-effective use of training resources.
- Use of training funds can spur a flexible reallocation of training resources to high-priority economic activities and high-priority target clientele, and can stimulate competition between public and private training providers.
- The introduction of normative financing in training can achieve greater accountability and output productivity.

Non-governmental training institutions and enterprises account for the vast majority of the regional capacity for skills development and should be part of the reform dialogue. Efforts must be made to:

- recognize and encourage non-governmental training provision, fostering a “level playing field” to stimulate greater competitiveness with the public sector;
- facilitate the contribution of formal sector enterprises to worker training through the provision of financial and material incentives (such as instructor training).
- Encourage employer associations and trade unions to provide their own training for their members (ILO, 2000a: para. 18).
- Expand worker productivity through training services for “higher end” informal sector enterprises, especially those engaged in manufacturing for niche markets (particularly for export).

Multinational enterprises (MNEs) can play a special role in the development and dissemination of skills, in part through the negotiation of fair technology transfer agreements (ILO, 2000a: para. 16). MNEs could agree to train more workers than needed for their immediate enterprises, which would be advantageous to the firms in selecting the best workers and to the country in expanding the stock of skills. However, the contribution of MNEs to the dissemination of skills depends on the extent to which they are well integrated with institutions in the host country. MNEs “(...) need to be embedded in a network of local suppliers and education and training establishments if the benefits of skill transfer and diffusion are to be captured” (Brown et al., 2001: 207).

Finally, it should be remembered that reforms of training systems, as with educational expansion, necessarily take time. As Brown et al. have pointed out, “skill formation policies cannot be delivered just-in-time” (2001: 237). For example, the reform process in Zambia has taken almost a decade and has not yet reached the point of full implementation.

Box 1 - Zambia
Granting autonomy to public training institutions

The Government of Zambia is changing the role it plays in training, from an emphasis on being a provider of training to financier, regulator and coordinator. As part of the reform, the Government has transferred the control of 21 public training institutions to autonomous management boards. This decentralization was carried out in parallel with a broader central government devolution of authority to local authorities. The new management boards are responsible for curriculum decisions, ensuring the maintenance of training standards prescribed by of the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), administering the affairs of the institution (including its finances) and providing such services as needed. Letters of appointment to the boards were issued in early 2000. All staff members of public training institutions were removed from the Government payroll as from 1 January 2000, and received their termination benefits from the Government during 2000. However, over a two- to three-year period, the Government agreed to continue paying the salaries of staff members opting to continue working under the autonomous management boards. Once this period ends, formerly public training institutions will have to compete for financing on the basis of quality, cost-effectiveness and responsiveness to demand. The Government considered two basic options as to how to implement the devolution of authority: gradual expansion of autonomy over several years; or quickly at the stroke of a pen. In the end, the Government decided to devolve authority quickly to avoid resistance by vested interests.

Box 2 - Mozambique
World Bank support for informal sector training in Madagascar
Madagascar Manpower Training Project, 1992-1999

A major change occurred in the orientation of the Centre National de la Formation Technique et Professionnelle (CNFTP) training fund during implementation in 1995 when the World Bank steered the fund towards the training requirements of small entrepreneurs and the informal sector. A methodology was developed to identify bottlenecks in production within particular economic activities with high export potential, such as raising duck for foie gras, essential oils and jewelry (see Cases 1 and 2, below, from Johanson, 2002: II, 48-49). The method is called analyse par filière professionnelle and involves a strategic analysis of the value added vertical chain (from bottom to top) in producing a product or service. The training fund required the businesses in the economic branch to group themselves, which they did with NGO assistance. Second, the methodology was applied to identify bottlenecks that could be solved through training and other interventions. In other words, the project brought expertise to bear for systematic analysis in a strategic business framework to identify what problems could be solved through training. It then helped identify experts in those areas, organize and provide the training to the producers.

Case 1
Training for small enterprises and the informal sector
The duck industry

The duck industry in Madagascar comprises the processing of high value added products, in particular *foie gras*, duck filets and *confits*. The sale of these products is primarily directed to local markets, especially through restaurants. However, the potential for exports is substantial, especially for high-quality products. The duck industry could provide important economic and social benefits because the products have a high added value and demand is growing, and because it offers rural dwellers complementary income with a low starting investment and a short cycle of production and income.

The main weaknesses of the duck industry in Madagascar are its dependence on foreign ducklings; wide fluctuation in the price of inputs; the high death rates of ducks at each stage of production, resulting from poor sanitary conditions; and inefficient marketing and sales. The main causes of these problems include: (i) insufficient knowledge and practice in production, marketing and sales; (ii) lack of finance for equipment and working capital; (iii) inadequate research on better local inputs (for example, breeding stock); (iv) poor industrial processing of the final products; and (v) lack of professional organizations to pool resources to solve the above problems. Success in meeting quality standards depends on knowledge of the necessary techniques and processes at each level of the production cycle.

The training of producers must be part of a broader approach that includes technical and financial support, but is clearly a key requirement at each stage of the production cycle, as shown in the following table.

Production cycle	Identified problems	Training contribution
Breeding	High mortality of breeders Cash flow problems	Breeding techniques (feed, sanitary conditions, etc.) Basic accounting (on-site training)
Hatching	High losses	Hatching techniques, maintenance (on-site training)
Production of lean ducks (ready for <i>gavage</i>)	High mortality (+25%) Below average weight Variation of input prices Cash flow problems	Production techniques (feed, sanitary conditions) Basic accounting (theoretical and on-site training)
Slaughtering	Below international sanitary standards	Quality control
Final processing	Products below export standards Heavy losses of products due to spoilage	Production techniques Quality control Marketing and sales (theoretical and on-site)

Case 2

Training for small enterprises and the informal sector Essential oils: geranium cultivation and processing

Madagascar grows around 25 aromatic plants which yield essential oils for cosmetics (especially perfume), pharmaceutical products, prepared meals, etc. The demand from industrialized countries is high with substantial value added. However, in 1975 an economic reform replaced efficient private producers with State companies with insufficient technical know-how. As a result, Madagascar lost international market share.

Madagascar's comparative advantage in this field derives from the climate, soils, altitude and lack of pollution in plantation areas, the wide variety of aromatic plants that can be grown, the availability of land, an inexpensive workforce, the availability of local farmers for subcontracting and low production costs. Weaknesses in the sector include: variations in the quality of the oils produced; the need to replant large agricultural areas to meet demand; poor and often obsolete equipment and a lack of investment capital; the lack of technical proficiency at all levels of the production cycle; and transportation costs to markets. Effective recovery in the essential oils industry required a bottom-up approach in quality product development defined in terms of the standards of the industrial end user.

A case in point is the geranium grown in Madagascar, similar to the Bourbon type that is in great demand because of its chemical structure. This geranium is well suited to the soils and climate of the highlands. Production from geraniums is relatively complex, inasmuch as each level of the production cycle can interfere with the end product. The main problems faced by the Malagasy geranium industry mirror the weaknesses of the industry as a whole. The proper development of the industry requires knowledge of techniques at each stage of the production cycle. Growth needs to rely on subcontracting to individual farmers because industrial plantations are vulnerable to diseases. However, the purchase of distillation equipment poses a financial constraint and the need for working capital is high in the first years of activity (preparation of soils, planting), but the harvest cycle is relatively short (three to four months). The professional organization has begun training activities with the help of the CNFTP. The role of training is identified in the following table.

Production cycle	Identified problems	Training contribution
Soil preparation	Soils not adequately prepared for geraniums	Specific techniques needed to prepare soils (on-site training)
Propagation	High mortality rates of cuttings	Training in management of cuttings, use of herbicides and pesticides (on-site training)
Growing and harvesting	Low yields owing in part to diseases, parasites	Control of pests and diseases Basic accounting techniques (theoretical and on-site training)
Distillation, packaging	Irregular quality of products Packaging poorly adapted to needs	Distillation techniques and quality control Accounting (theoretical and on-site)
Sales	Lack of knowledge of buyers, networks and practices Poor advertising	Marketing Participation in international fairs (preparation) Basic international financial exchange tools (theoretical)

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