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Pro-Poor Growth Strategies in Africa

Pro-Poor Education Policies and Labour demand

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I. Introduction

The renewed focus on poverty reduction as the principal goal of development has generated keen interest in the concept of "pro-poor growth". The significance of pro-poor growth and how it works has been a subject of intense controversy in the development literature since the 50s.

During the 50s and the 60s, the primary emphasis was on raising levels of investment in developing countries, initially by the injection of foreign aid, in order to achieve rapid growth. The expectation was that this would lead to economic growth and consequently a 'trickle-down' effect, largely through higher employment and real wages, which would alleviate poverty. However, in many situations, this process was accompanied by rising inequality. It was indeed realized that the 'trickle-down' development approach, which implied that the poor benefit from economic growth only indirectly through a vertical flow from the rich did not actually focus on reducing poverty or addressing inequalities.

Given the negative effect of poverty on growth, the focus shifted to the design of targeted anti-poverty interventions in the form of 'social safety nets' to tackle poverty. The objective of this strategy was to reach those groups that remain marginalized by the process of growth. This is the implicit philosophy behind the Poverty Reduction Strategy Papers (PRSPs) being prepared by most developing countries, including African ones, for concessional financing by international financial institutions (mainly IMF and the World Bank). The macroeconomic framework embodied in the PRSPs continues to focus on stabilization (leading to growth) objectives with targeted intervention imposed to manage any negative fallouts of the strategy on the poor.

It has now become increasingly evident that developing countries, and in particular Africa, should go beyond the establishment of safety nets, and should also directly focus on providing jobs and raising income of poor through explicit policy interventions in the process of growth. The experience, by and large, is that countries, which have been most successful in reducing poverty, have been ones, which have achieved rapid and equitable growth. There is recognition now that public policies need to influence both the process of generation and distribution of income in such a way as to disproportionately benefit the poor. In other words, the focus now is on pro-poor growth.

There is an existing consensus on different policies to achieve pro-poor growth (mainly, macroeconomic stability, financial sector development, physical capital, trade openness, industrial policy, able and functioning state, political and social security; gender equality; access to basic education, health and family planning services; improved access to important factors of production; income distributional equality; increase in labour productivity in agriculture, institutions and governance, human development, (Klasen's 2001; Ghura et al., 2002, among others).

Education in particular, has been increasingly recognized as a key element in the reduction of poverty whether it is defined in terms of potential provision of income earning assets or production of public goods. Education's central role in societal development has been re-stated in recent thinking on economic development for high quality growth. Such growth cannot be measured by economic results alone, it must also result in improved social conditions for the poor. Thus, the educational level of populations is both an input into an economic growth path but also an outcome of economic growth in that poor people are targeted for upgrading their skills necessary for participation in a modern economy. In other words, the endowment of educational assets renders poor people more equipped and capable to actively participate in modern economies. Secondly public expenditure on education is one of the main re-distributive channels for poverty reduction.

A variety of considerations justify the public provision of social services in general, and education and health, in particular. These include:

- The standard market failure arguments such as the externalities generated by education and health as well as the incompleteness of credit and insurance markets;

- Scale economies caused by the relatively large fixed costs associated with educational and health facilities; and

- The interventions required in order to reduce poverty and inequality.

Consistent with these considerations, a substantial proportion of investment in human capital in Africa is financed by the state. In fact, public spending on education and health in Africa is high. This expenditure pattern in part reflects the phase of demographic transition at which most African countries are located. A growing proportion of the population of these countries is young, thereby creating the need for a correspondingly growing public expenditure, particularly in education. Another reason coming to the fore is the fact that to

reduce poverty the overall coordination of policy interventions is the role of the State as producer of public goods.

One of the most important instruments in pro-poor growth is the Poverty Reduction Strategy paper implemented by a number of African countries. As was said above, the link between debt reduction, macroeconomic stabilization and poverty reduction is the fulcrum of this financial instrument. The emphasis of the PRSP is supply-side constraints of inadequate human capital in the economy. Supplying better human capital would reduce poverty since the poor would be provided with assets to actively participate effectively in the economy.

The nexus between education, economic growth and poverty reduction is also reflected in the sectoral analysis of levels of education. The task of this paper is to develop a more thorough picture of this link by analyzing the supply of education and the labour demand of educational skills. Various supply-related indicators such as enrollment and access, expenditure on education, quality of education and rates of returns to education will be analyzed, with a view to determine how the educational systems have benefited the poor. This is the aim of the first section of this paper. From the demand side, the paper will attempt to indicate the mismatch between supply and demand of educational skills in Africa, and, at the same time the limits of employability of poor people. Thus, the signal by the labor market has to be taken into account in analyzing pro-poor growth strategies. This is the main purpose of the second section of the paper. Section three will provide emanating policy recommendations.

II. The Supply-side of Education

2.1 Trends in Enrollment Rates

The World Education Forum, meeting in Dakar, Senegal in April 2000, underscored the need to eradicate extreme poverty and committed to work towards this aim through education.

The role of education in poverty reduction is critical as it is also a key to wealth creation. Within this context, one of the pledges of the Dakar Framework for Action –Education for All (EFA): Meeting our Collective Commitments- was “to promote EFA policies within a sustainable and well-integrated sector framework clearly linked to poverty elimination and development

strategies". The role of education in this process is particularly one of achieving universal primary education and adult literacy.

Primary Education

Table 1 below which indicates the classification of countries according to their net primary enrollment ratio (NER)[1] (considered as a preferred indication of access to education and proxy of knowledge), shows that Latin America and the Caribbean, North America and Western Europe, and to a lesser extent, East Asia and the Pacific have recorded rates close to, though still less than 100. However, average NERs for Sub-Saharan Africa are less than 70% (18 of the 25 cases recorded). Moreover, the UNDP Human Development Report 2002 indicates that, of the 21 Sub Saharan African countries for which data is available, none will achieve the universal primary education goal, and only 7 countries (Benin, Mauritius, Namibia, Senegal, Swaziland, South Africa and Togo) will be on track (Chart 1).

Table 1

Classification of Countries/Territories according to their Net Primary Enrolment ratio (NER) - 1999

	NER<50%	50%>=NER<70 %	70%>=NER<90 %	90%>=NER<100 %	Data not available
Central/Eastern Europe (20)		Yugoslavia (1)	Croatia, Hungary (2)	Albania, Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Poland, Romania, the Former Yugoslav Rep. Of Macedonia (9)	Belarus, Bosnia and Herzegovina, Republic of Moldavia, Russian Federation, Slovakia, Turkey, Ukraine (8)
East Asia/Pacific			Cambodia, Lao	Australia, China,	Cook Is. Dem.

[1] According to UNESCO, the net enrolment ratio (NER) takes account of the age structure of those enrolled by excluding all those children who are older or younger than the official school-eligible age group from the numerator of the ratio. By definition, it cannot exceed 100%.

(26)			PDR, Myanmar, Thailand (4)	Indonesia, Japan, Malaysia, New Zealand, Rep. Of Korea, Samoa, Vanuatu, Viet Nam (10)	People's Rep. Korea, Fiji, Kiribati, Marshall Is., Nauru, Niue, Papua New Guinea, Philippines, Solomon Islands, Tonga, Tuvalu (2)
Latin America/Caribbean (41)			Barbados, Chile, Colombia, Guatemala, Nicaragua, Venezuela (6)	Argentina, Belize, Bolivia, Brazil, Costa Rica, Cuba, Dominican Republic, Ecuador, Jamaica, Netherlands, Antilles, Mexico, Paraguay, Peru, Panama, St. Lucia, Trinidad and Tobago, Uruguay (17)	Anguilla, Antigua and Barbuda, Aruba, Bahamas, Bermuda, British Virgin Is., Cayman Is., Dominica, El Salvador, Grenada, Guyana, Haiti, Honduras, Montserrat, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, Turks and Caicos Is. (18)
North America/Western Europe (26)			Cyprus, Germany (2)	Austria, Belgium, Canada, Denmark, France, Greece, Finland, Iceland, Ireland, Israel, Italy, Netherlands, Norway, Portugal, Spain, Switzerland, Sweden (16)	Andorra, Malta, Monaco, San Marino (4)
South/West Asia (9)			Islamic Republic of Iran, Pakistan (2)	India, Maldives, Nepal (3)	Afghanistan, Bangladesh, Bhutan, Sri Lanka

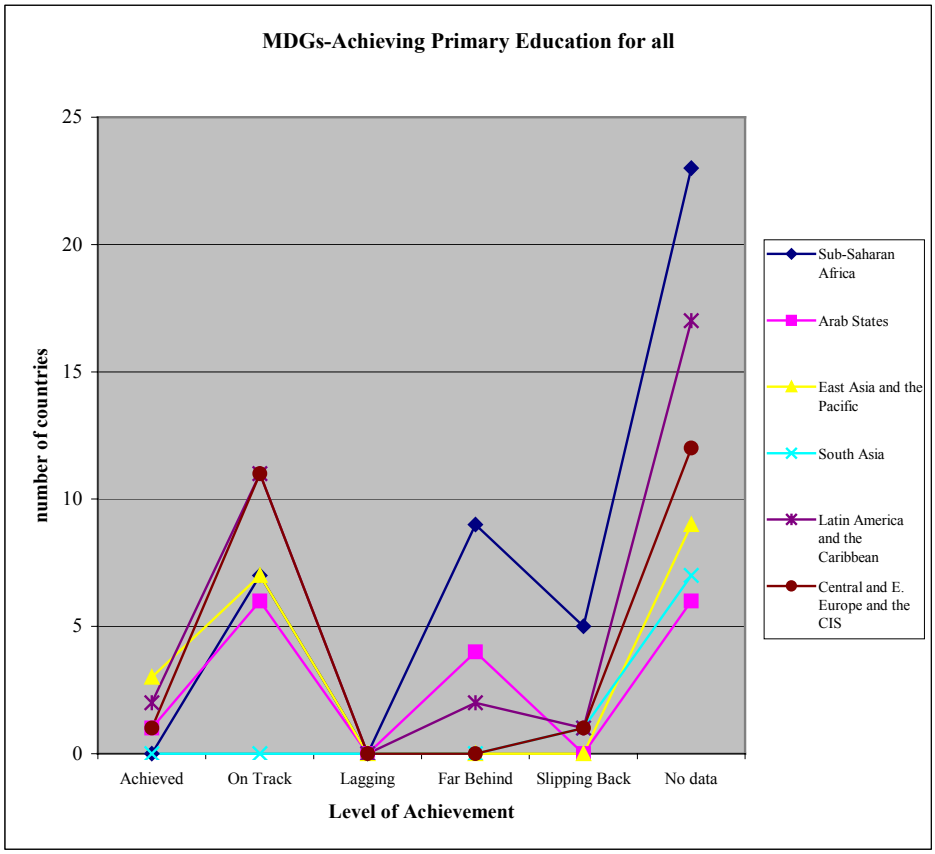
					(4)
Sub-Saharan Africa (45)	Angola, Burkina Faso, Burundi, Eritrea, Guinea, Niger, United Republic of Tanza-nia (7)	Chad, Comoros, Congo, Côte d'Ivoire, Gambia, Guinea-Bissau, Madagascar, Mozambique, Senegal, Sierra Leone, Zambia (11)	Benin, Botswana, Equatorial Guinea, Namibia, Zimbabwe (5)	Mauritius, Rwanda, Togo, Swaziland (4)	Cape Verde, Central African Republic, Congo, Cameroon, Dem. Rep. Of Congo, Ethiopia, Gabon, Ghana, Kenya, Liberia, Mali, Malawi, Nigeria, Sao Tome and Principe, Sey-chelles, Somalia, South Africa, Uganda (18)

Source: UNESCO (2002) Monitoring Report on Education for All.

Another aspect of a pro-poor approach, institutionalized in the Millennium Development Goals is the achievement of primary education for all and the gender distribution of such universal primary education (see Chart 1& Table 2, respectively). The gender equality, as shown by certain empirical data, is a relatively more pro-poor policy instrument in that there is an intergenerational transfer of assets from mother to child. In this respect, out of 29 countries where gender disaggregated data is available, only 15 will be on track in achieving gender equality in primary education (Table 2). These unequal educational opportunities between male and female persistently contribute to inequality in employment opportunities and income and to social tension. Hence, gender equality in access to education is among the most serious challenges facing African countries.

Chart 1

MDGs Primary Education



Source: UNDP (2002), Human Development Report

Table 2

Millennium Development Goal 3: Achieving Gender Equality in Primary Education

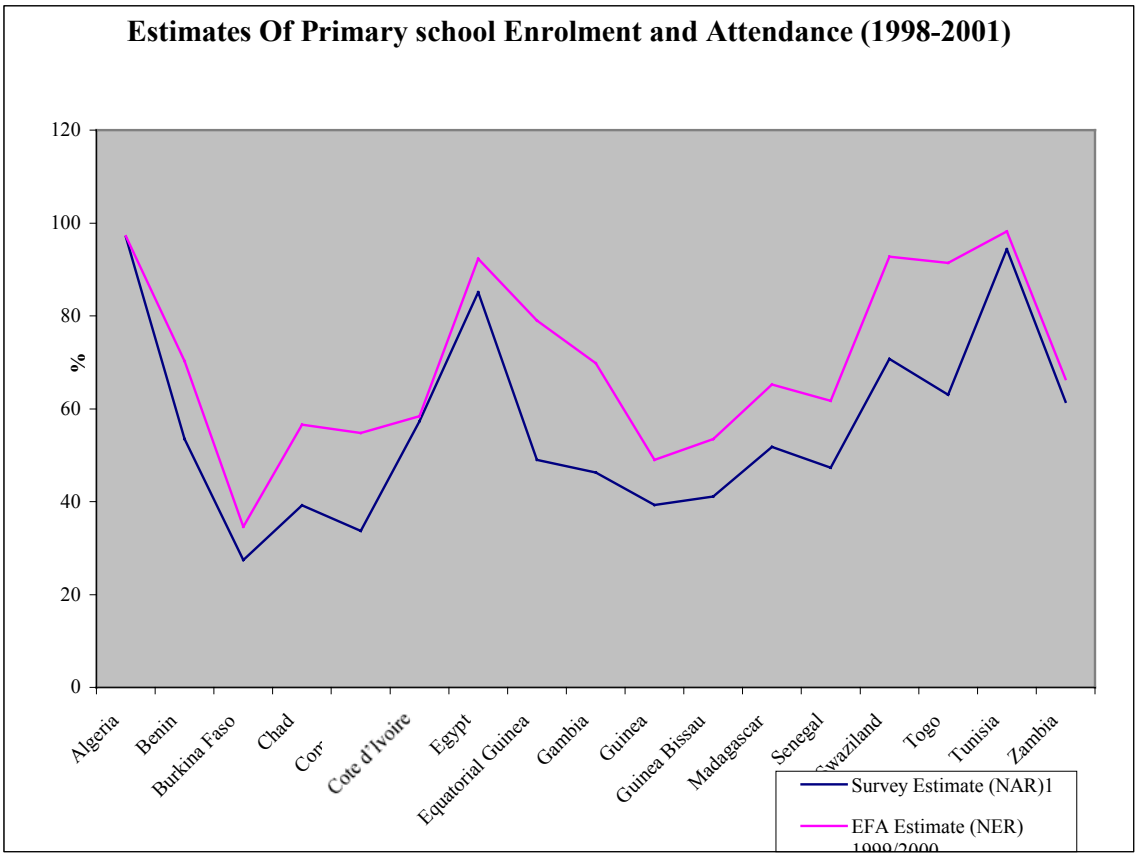
	Achieved	On Track	Lagging	Far Behind	Slipping Back	No data
Sub-Saharan Africa	5	15	0	8	1	15
Arab States	1	12	0	1	0	3
East Asia and the Pacific	5	7	0	1	0	6
South Asia	0	5	0	0	0	3
Latin America and the Caribbean	3	13	0	1	0	16
Central and E. Europe and the CIS	4	16	0	0	0	5
Total	**20**	**70**	**0**	**13**	**1**	**64**

Source: UNDP (2002), Human Development Report.

Table 3 below shows results for 40 African countries based on estimates of primary school enrollment and attendance (1998-2001) as provided by UNESCO (2002). It clearly appears that Net Attendance rates (NAR) are usually lower than Net Enrolment rates (NER). This questions the declarations and policies that emphasize enrolment rather than attendance in a number of countries, where many pupils may register at the beginning of the year, but do not subsequently attend on a regular basis. This lack of attendance is usually due to difficulties facing poor families to cover educational costs, which include fees, books and other schools materials, but also indirect costs such as the loss of the child labour time (particularly in rural areas where most pupils are also helping their families in farming and related activities). This also points to the incongruence between free primary education and the necessity to pay for ancillary services. Given the low income of poor people in

Africa these services are in reality a financial burden, and this is one of the possible causes of the difference between NAR and NER.

Chart 2
Estimates of Primary School Enrolment and Attendance (1998-2001)



Source: UNESCO (2002), EFA Global Monitoring Report.

Explanatory Notes: [1]Net Attendance Rate (NAR); [2]Multiple Indicator Cluster Survey (MICS) by UNICEF; and[3]Demographic and Health Survey (DHS) by USAID, 1998-2001. Net Enrolment Rate (NER): UIS data for 1999/2000.
Age groups for MICS and DHS: Gabon and South Africa data for ages 6-10 (official primary age 6-11 and 6-12), Tunisia 6-12 (official primary age 6-11). Sudan includes only Northern Sudan. Averages are weighted by the total population of each country.

Nonetheless, if Gross Primary Enrollment Ratio[2] is considered many African countries have achieved progress in expanding enrollments and reducing gender disparities. For example, Uganda has increased its GER from 71.3% to 140.9% from 1990/91 to 1999/2000. Malawi from 67.9 to 158.1% and Rwanda from 69.6 to 122.4% in the same period (UNESCO, 2002)

Secondary and Tertiary Education

In spite of the critical role of basic education in pro-poor growth, it is also important to ensure balanced development of education, in other words improved education systems at all levels. It has been increasingly recognized that higher education is crucial for economic growth. Globalization, the increasing importance of information technology in the 21st Century, and rapid technological change have made knowledge and increasing skills essential for competing in the world economy. Higher education provides young people the chance to acquire attitudes and skills that are unlikely to be developed during primary grades.

This was also confirmed by the regional study "Secondary Education in Africa" (CP/SEIA) by the World Bank[3], which indicates that less than one-third of secondary school-age group is enrolled in secondary schools in most African countries. Moreover, country level data for the period 1990/91 and 1999/2000 showed uneven evolution, with some countries recording high enrollment rates (i.e., Botswana, Mauritius and South Africa) (see Chart 2 below) [4]. But for most of the countries, enrollment levels are low, reflecting the difficulties facing poor households to meet the cost of secondary schooling for their children.

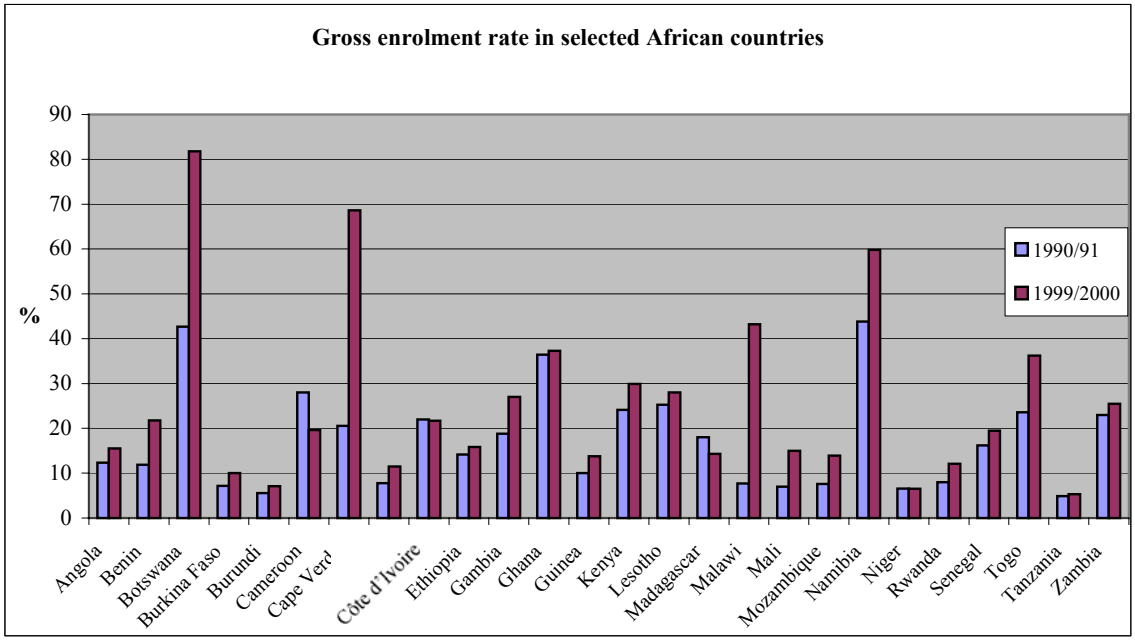
Chart 3

[2] The Gross Enrolment Ratio (GER) expresses the number of pupils at a given level of schooling – regardless of their age – as a proportion of the number of children in the relevant age group. The GER can be higher than 100% if children begin their first grade when they are older (or younger) than the official starting age, or if there is grade repetition.

[3] The Concept Paper for the Regional Study "Secondary Education in Africa" (CP/SEIA) is the result of an extensive consultation and review process with educators and policy makers in Sub-Saharan Africa, as well as donor agencies and World Bank Human Development Staff.

[4] Gross and net enrolment ratios have been calculated using population estimates produced by the United Nations Population Division. The 1990 population-sensitive ratios were based on the 1998 United Nations Population Division, whereas the 1999 population figures were based on the 2000 United Nations revision. This means that indicators utilizing population data for 1990 may not be comparable with those utilizing 1999.

Secondary Gross Enrolment



Source: UNESCO 2002 EFA Global Monitoring Report.

The Tertiary enrolment figures in Africa present an uneven picture and available data indicate that the average annual growth rate of tertiary enrollment for sub-Saharan Africa during the period 1970-1996 was mixed. Initially there was an increasing trend until 1980 reaching a maximum rate of 12.5 percent, but then after it declined to 6.7 percent (less than the rate achieved during 1970-1975) in 1990-1996. The corresponding trend for Eastern Asia/Oceania was similar to SSA until 1980, reaching 22.2 percent, declined for the period 1980-1990 but unlike SSA started to increase during the period 1990-1996. The trend in Latin America and the Caribbean is different in that it has reached its maximum growth rate in 1970-1975 (20.5%), declined to 2.9% during 1985-1990 and then started to rise in 1990-1996. Developing countries in general experienced similar pattern of growth rate like that of Latin America and the Caribbean rising to 5.4 percent in 1990-1996 after a continuous decline for the period 1970-1990. The trend of the growth rate for developed countries was declining throughout the period like that of SSA with a lowest rate, 0.8 percent, recorded in 1980-1985. It has to be noted that the growth rate of enrollment in SSA was the highest compared to other regions of the world during the period 1990-1996, which is a bit higher than that of Eastern Asia /Oceania.

These figures point towards certain bottlenecks in the educational system, when these are linked to pro-poor growth and emphasis on primary education. The supply of primary school teachers, the skill profiles of modern labour markets, as said above requires tertiary graduates and this has become a serious constraint on the link between education and economic growth in Africa.

In absolute terms enrollment in SSA reached 2.2 million (2.49 % of the world) in 1997 from 1.4 million (2.04 % of the world) in 1990.

An interesting feature of Tertiary enrolment in SSA is the fact that female participation of albeit dismal overall enrolment figures, has been growing. This, as in primary education graduates, has an intergenerational positive effect on children's educational and health status thus increasing the pro-poor impact. The share of females in tertiary enrollment for SSA had an increasing trend during the period 1970-1996 with 13.49 percent in 1970 and reaching 35 percent in 1996 (Table 4). This magnitude is lower than the average for developing countries and Eastern Asia/Oceania, which was 41 and 40 percent respectively in 1996.

Table 4
Females as a % of Total Tertiary Enrollment, 1970-1996

Grouping\period	1970	1980	1985	1990	1995	1996
1. SSA	13.49*	22	25	32	35	35
1.1 Low-income other	15	21	25	28	28	28
1.2 Low-income semiarid	13	18	17	18	20	20
1.3 Middle-income oil exporters	11	15	15	15	16	16
1.4 Middle-income oil importers	28	25	26	41	45	45
2. Eastern Asia/Oceania	no data	34	36	38	40	40
3. Latin America/Caribbean	33.65*	43	45	48	49	50
4. Developing Countries	no data	34	36	39	41	41
5. Developed Countries	no data	49	50	51	53	53

Source: Association for The Development of Education in Africa (ADEA**)**

2.2 Financing of Education

Notwithstanding the social sector budgetary allocation in SSA has been relatively high, compared with countries with similar GDP, the outcomes have not been adequate. As can be seen from Table 5 Africa spends more on education than other regions, yet the outcomes are not sufficient.

Table 5
Public Spending on Education (percentage of GDP)

Region	**1975**	**1993**
Africa	4.0	3.8
Asia	2.6	2.7
Latin America	2.9	2.8
All countries with GDP below US$2000	3.6	3.6

Source: World Bank (2000)

In fact if Table 5 had to be compared to some educational outputs, then the resultant scenario allows for deeper analysis. In Table 6 one can observe that the outcome of such expenditure are not reflected in adequate well being of African populations. The low outcome of public expenditure in education can be caused by a number of factors, among which inefficient public spending processes; high unit costs of educational goods as well as the mismatch between the production of such public goods and the endowment factor of using those goods in a productive fashion.

Table 6
Some measures of Well-being

Region	HDI (1998)	Adult Literacy (1998)	Combined Scholl Enrollment (1998)
Sub-Saharan Africa	0.464	58.5	42
South Asia	0.560	54.3	52
South-east Asia and the Pacific	0.691	88.2	66
East Asia	0.716	83.4	73
Latin America and the Caribbean	0.758	87.7	74
Eastern Europe and the CIS	0.777	98.6	76
OECD	0.893	97.4	86
World	0.712	78.8	64

Source: UNDP, Human Development Report 2002.

Public spending on education has been rising in most countries, including Africa. The African continent has however experienced lower levels of increase. Table 7 below indicates average public education unit cost in terms of GDP per capita across different regions. As can be expected primary school unit cost is lower for all regions, but what is more significant is the high cost of post-primary education in Africa. This figure, given the limited resources in African countries, shows that allocation is highly skewed towards limited numbers and the rich groups in African societies. This is extremely important because one of the key elements of pro-poor growth is to optimize public expenditure, and primary education unit cost being much lower, is therefore a more efficient criteria of public spending. Secondly, given the high cost of tertiary education, many schemes of cost- sharing and private provision of tertiary education have been introduced, further decreasing the possibility for poor people to enroll in tertiary educational institutions.

Table 7
Education Unit Costs, 1973-93 (as percentage of GDP per capita)

Region	Primary		Secondary		Tertiary	
	1975	1993	1975	1993	1975	1993
Africa	20	15	117	56	1293	656
Asia	12	8	32	19	192	86
Latin America	8	7	12	11	149	66
All countries with GNP below US$2000	16	12	72	37	758	373

Source: World Bank (2000)

A major challenge for Africa's higher education in the 21st century remains one of access and the resources to provide access. This issue of access will however be constrained by an increasing population of primary and secondary schools population in most African countries, and the fact that public spending will be overstretched by competition from other public services and external debt servicing. How will these countries reach the balance between expansion and limited fiscal resources remains a major issue. What will compound this issue is the growing demand of marginalized groups for increased access to higher education.

As has been indicated earlier, evidence from a range of African countries suggests that a larger percentage of public spending on education goes to government actions that benefit the wealthy (World Bank, 2001a). Countries experiencing war, civil conflict, economic collapse and epidemics disrupt services hold back school attendance and financing.

2.3 Quality of Education

A major trend over the past three decades has been a rise in qualification requirements for employment, driven by technological change. This could be materialized only through quality and relevant educational programs. In Africa however, quantity of schools and teachers has been cited as a major explanatory factor for the failure to achieve universal access to basic education. Indeed, shortages of schoolteachers and limited school facilities have resulted in school overcrowding. This is reflected in the pupil-teacher ratio, which in the majority of African countries have been high. Some countries with low pupil-teacher-ratio in 1999/2000 are: Mauritius and Seychelles 16:1; Togo 17:1; Senegal 19:1; Niger 19:1;Uganda 25:1.9 (UNESCO, 2002). It is significant that Mauritius, Seychelles and Uganda are high economic performers and known to have a relatively educated labour force.

Another important reason to the failure to achieving universal access could be found in insufficient education quality and relevance. This explains the mismatch between available skills and the quality of skills required for national economies to compete globally.

Ideally, educational systems should enable people to acquire skills necessary to adapt to rapidly changing socio-economic conditions, both nationally and globally. But education in most African countries does not fully meet such requirements, although the magnitude of the problem may differ at the country level. Many reasons could be found to explain such a situation, among which are the low qualification of teachers, which contribute a lot to high repetition and drop out rates in many countries. Additionally, many teachers must contend with the near absence of basic school supplies (textbooks, pens, books, desks, etc). This has been aggravated by the absence of sustained high standards of training for teachers. Related problems have to do with low salaries. Indeed, cut in government expenditures and inflation have meant lower real wages for teachers in many countries and this has hindered attempts to attract and retain qualified professionals.

2.4 Rates of Return to Education

Another criteria for the predominance of basic education in pro-poor growth is the whole issue of rate of return to education. This alongside the input public unit cost of providing education, discussed above, form the rationale for emphasizing primary education in MDGs and PRSPs as one of the key areas of public intervention for achieving pro-poor growth.

Studies on returns to education date back at least the 1950s and 1960s when economist sought to explain sources of economic growth that were not accounted for by the traditional measures of labor and capital inputs (Kuznets, 1952, among others). Becker (1964) attributed the difference in average earnings between workers with a four-year college attendance and those with only a twelve-year school degree to their attending college. He compared the discounted value of this age-earnings stream of benefits to the opportunity cost of the earning a student forgoes to attend college plus the direct costs of college tuition, materials, and fees. Mincer (1974) then hypothesized how returns on post-schooling experience or on-the-job training accumulated over the lifecycle, which helped him explain the upward sloping profile of earnings with age after an individual leaves school.

Interest in estimating educational returns was renewed in the 80s ad 90s due to the rise in earning inequalities in many countries (see, for example Murphy and Welch, 1992). This rise was seen in the literature as resulting from systematic changes in the production process (often technology-related), which led to increased demand for certain types of labour (often more highly educated). As has been argued since the 60s by Nelson and Felps (1966), Welch (1970) and Grilliches (1969), the speed of technological innovation requires a more flexible educational system.

According to the European Commission, estimates of returns on education vary little with respect to the method of estimation. Returns do however depend on the level of economic development and level of education of a country/region. Psacharopoulos and Patrinos (2002) confirm these results (see tables 8 and 9 below), indicating that returns are larger at the margin for poorer and/or less educated groups of people, and that private returns to higher education are increasing.

Thus, primary school returns are higher than post-primary education and even private rates of return are higher for SSA. This is an important aspect that justifies the investment in primary education, especially if one considers pro-poor growth. If these returns are correlated against per-capita income groups (See Table 8) again primary education is a more viable use of public funds in education.

Table 8
Returns to Investment in Education by Level, Latest Year, Averages by per capita Income Group (Percentage)

Per Capita Income Group	Mean per capita (US$)	Social			Private		
		Primary	Secon-dary	Higher	Primary	Secon-dary	Higher
High Income ($9,266 or more)	22,530	13.4	10.3	9.5	25.6	12.2	12.4
Low Income ($755 or less)	363	21.3	15.7	11.2	25.8	19.9	26.0
Middle Income (to $9,265)	2,996	18.8	12.9	11.3	27.4	18.0	19.3
World	7,669	18.9	13.1	10.8	26.6	17.0	19.0

Source: Psacharopoulos and Patrinos (2002).

Another method used is to evaluate the coefficient of years of schooling against income and, on average, another year of schooling translates into a 10 percent increase in individual earnings each year. Average returns to schooling are found to be highest in the Latin America and the Caribbean region, as well as Sub-Saharan Africa (table 9 below). The lowest returns are registered in non-OECD European, Middle East and North African countries.

Table 9
The Coefficient on Years of Schooling: rate of Return , Regional Averages

Region	Mean per Capita (US$)	Years of Schooling	Coefficient (per-cent)
Asia	5,182	8.4	9.9
Europe/Middle East/North Africa	6,299	8.8	7.1
Latin Amer-ica/Caribbean	3,125	8.2	12.0
OECD	24,582	9.0	7.5
Sub-Saharan Africa	974	7.3	11.7
World	9,160	8.3	9.7

Source: Psacharopoulos and Patrinos (2002).

There are three possible reasons why both could hamper the above results methodological as well as empirical problems (UNICEF, 2002). First, it is

argued that estimates of social returns to investment in education assume that market wages reflect productivity differences. Yet labour markets do not work perfectly, and earnings are a particularly fallible indicator of productivity where large proportions of the wage –employed are in the public sector, on administrative pay scales. Second, most estimates do not allow for differences in ability, parental background, or the quality of the schools attended by workers included in the samples. Third, the full costs to household of sending children to school are often underestimated. For example, in sending their children to school, poorer households may loose the value of their children working in the house or farm. And the frequent omission of these 'opportunity costs' from calculation of the net benefits of schooling may cause some upward bias in the estimated returns at primary, relative to higher levels of schooling.

Various authors further argue that, in many countries, there is an upward shift of labour shortage towards those with secondary and tertiary education. This has been reflected in wage differentials, and evidence from Africa suggests that private returns to education may now be rising at secondary and tertiary levels relative to primary level. In fact latest studies on Zambia and Botswana have shown that higher levels of education have higher rates of return (Skyt Nielsen & Westergard-Nielsen 2001: Siphambe 2000).

2.5 The Issue of Access Imbalances

The demand for schooling is greatly affected by the gender imbalances in access to school enrolment, another feature of school enrolment in Africa is the urban-rural, ethnic and class differentials. It is argued that children of poor families, especially those in rural areas, and children of minorities tend to have lower enrolment rates and to drop out of school more frequently than those from wealthier families or from the dominant majority.

Some studies have shown that there are wealth differences in school enrollment and attainment in most developing countries, but the gaps vary widely across countries (UNFPA, 2002). It is argued that that the differences between rich and poor are particularly large (more than 45 percentage points) in several West African countries –Benin, Burkina Faso, Mali, Senegal. In contrast, small differences are seen in Kenya and Malawi. UNFPA Measures of school attainment also demonstrate wealth gaps that vary across countries. For example, in India, the gap (in this case in the median number of years of schooling attained among 15 to 19 years olds) between the richest 20 percent

and poorest 40 percent is 10 years, whereas in Tanzania it is only two years (World Bank, 2001b).

Why are enrollment rates lower and educational outcomes worse among the poor? Because it is harder for poor children to reach school: the latter tends to be concentrated in cities and areas where the wealthier households reside (UNFPA, 2002). For example, in Guinea, the average travel time to the nearest primary school is 47 minutes in rural areas but only 19 minutes in urban areas (Ministère de l'éducation pré-universitaire et l'éducation civique, 2001). It is also observed that in many African countries, the widespread use of child labour (particularly in rural areas) very often interferes with children's attendance at school. Hence, in these areas, school enrolment and dropout rates are much worse.

In multi-ethnic countries, the dropout rates among ethnic minorities are also higher than that of dominant groups. Evidence also shows that in many countries, children from the low classes lag behind in educational achievement.

The predominance of primary school enrolment in efforts to reach the MDGs and to implement pro-poor policies has had an effect on financing of education in African countries.

III. How labour demand affects pro-poor education policies

Besides the demand for schooling, and the problems related to access one of the critical aspects of development in African countries is the matching of labour demand to educational output.

Education is not solely the transfer of skills by the provider to the user. It is also cognitive development of the user useful to face the outside world. In economic terms it is difficult to estimate the externalities of education, yet some form of economic analysis of returns to education is necessary. This is much the more so in Africa, given the limited resources available. One criterion for calculating educational outcome efficiency is the availability on the labour market of the skill profile provided.

In a competitive economy the labour market facilitates the supply-side decision by individuals to invest in particular skills with the objective of maximizing their lifetime earnings. On the demand side the labour market facilitates decisions by firms to utilize particular skill-mix in combination with other factors of production to maximize profits. Thus the labour market provides the vital link between the education sector and the other sectors of the economy. The demand for education is the demand for employable skills.

In Africa there is widespread disparity between what educational institutions produce and demand by the labour market. Besides the possible cause of low quality of educational output, another possible cause is the cognitive skills imparted at primary education level do not match labour demand. For example 47% of social science and arts graduates in Ghana are unemployed and at least 17% of Nigeria's educational output is not absorbed by the labour market (Boateng 2001). Another factor could be caused by the expansion of human capital stock not being matched by adequate investments in physical capital and/or by the low growth of income caused by inconclusive results on rates of return to the educational investment (Appelton & Teal 1998). All this is further exacerbated by the ICT revolution that has caused a complete change in skill profiles demanded by the market.

Besides the conflicting results of rates of return, there is no doubt that the investments in education in general and primary education in particular, has not been met by corresponding economic growth. Despite starting from a low

level of per-capita income since the 60s Africa has achieved a rapid growth of some aspects of human capital-particularly in the expansion of education.

The pro-poor literature, for the most part, has shown that for any type of poverty reduction there has to be economic growth as well as public intervention of distributional aspects of such growth. For example certain calculations on threshold values of economic growth have been computed and a minimum of 7% growth rate established if the poverty levels had to be deleted half by 2015. (ECA 1999).

The emphasis given so far has been on enrolment rather than attainment. If attainment means the acquisition of skills that allow active participation, then the pro-poor focus on primary education is limited.

On the input side unit cost of primary education does render the investment in basic education a more focused allocation of resources since more students can be enrolled. In general the quality of human resources can influence the extent of technological adoption and innovation. It can do so in at least three ways. First, education promotes the flexibility and information-processing capacity of producers. There is substantial evidence associating such an effect to education. Second, working through complementarities in production, the stock of human capital can affect the quality and utilization pattern of physical capital. Third, longer life expectancy can enhance the incentives to long-term and/or productivity-enhancing investments.

Yet the basic education policy choice as one of the pro-poor strategies (usually PRSPs emphasize basic education) is constrained by three important elements. First of all empirical evidence of public spending on education in Africa shows that it is not equitable. There is a high likelihood that access to public goods is skewed towards higher income brackets. For example children not completing primary education in Mali and Morocco are over 30% for the lowest 40% income group, while the top 20% income bracket had a much lower drop out rate, approximately 10% for Mali and less than 5% for Morocco. (UNICEF, 2002). Secondly the idea that, given the focus on input costs, basic education costs less per unit and therefore more people can be reached with limited resources. This rationale does not include the output side of education. The writing and reading skills of basic education are inadequate for the skill profiles of modern societies. Also the quality of basic education is not given importance, thus repetition rates and skill inadequacies ensue. Thirdly the "employability" of basic education graduates is not very high, since most jobs being created globally, including Africa have been in the modern technologically more intensive sectors.

Most of the endogenous growth models give a prominent role to human capital when explaining economic growth (Lucas 1993, Romer 1986). A second branch of the economic literature on the link between education and economic growth sees the stock of human capital as the driving force for development (Nelson & Phelps 1966). The latter is more useful because it emphasizes the level of education to prioritize related growth. The main point remains that there are large pecuniary benefits of investing in human capital whether the investment is at societal as well as individual levels (Paddison & Mitiku 2001).

Nelson and Phelps (1996) come to a conclusion that human capital should not be treated as a usual factor of production and that human capital influences GDP per capita growth through two channels. Technology of a country will grow at a certain rate depending on initial human capital endowments. On the other hand countries that have a sufficient knowledge base find it easier to import ideas and technologies. In other words human capital is a factor that only affects output through technology. Any pro-poor education strategy that does not take the global economy into consideration and its technological necessities is bound to have a sub-optimal effect on poverty reduction. In fact the institutional link between education, both type as well as level, and the labour market in East Asia has been proposed as a Best example case of how development of human resources and economic development went hand in hand in a virtuous circle of growth (World Bank, 1993).

Post-basic education and poverty alleviation

The idea that the ability of a society, and Africa is no exception, to produce, select, adapt, commercialize and use knowledge for sustained economic growth is presently considered obligatory. Comparative advantage of countries is no longer being based on natural endowments, but on man-engineered knowledge. For example the proportion of knowledge intensive goods from Bangalore in international trade has increased from 33% in 1976 to 54% in 1996. In this context the real growth of value added (1986-94) was 3% for knowledge-based industries against 2.3% for the business sector in many OECD countries (ILO 2002).

Thus a knowledge-based economics growth is determined by a number of inputs, amongst which a good post-basic education system. For instance tertiary education institutions support knowledge-based economic growth strategies through training of an adaptable qualified labour force; generate new knowledge; supply labour for lower levels of education. Besides when looking at the public benefits of tertiary education the existence of comple-

mentarity between tertiary and lower levels of education as well as cross-subsidization across educational disciplines, programmes and levels leads to a higher public-good effect. The strategy for pro-poor growth requires a growing economy and, given the current technologically based growth, requires a development strategy that links economic growth to the application of technology and Science and Technology capacity. In sub-Saharan Africa these two areas are lacking, alongside the production of science and technology graduates. For example a key indicator is the ratio of foreign patents to local patents, which is 690:1 nonresidents to residents in low-income countries and 3.3:1 in developed countries (World Bank 2003). In Africa only 10% of secondary school graduates advance to institutions of higher education and if this figure had to be further disaggregated the enrolment in natural sciences, engineering and medical sciences is dismal especially if compared to Asian countries like Indonesia and Korea (ERA 2001).

The emphasis on basic education as a strategy for pro-poor growth in a global economic, wherein ICT and services in general are predominant for employment creation is seriously limited. This can be recognized not only as a limitation of pro-poor growth, but as a general policy for all countries to meet the skills required by labour markets, as can be seen from the following Figure 1.

Figure 1 shows different concepts of literacy by UNESCO, OECD and European Union, which try to come to terms with the basic skill requirements of the modern economy. In a survey done by OECD of 20 Central European countries up to 75% of the adult population fail to meet Level 3 and thus their skills do not match labour demand. This demonstrates two points, firstly that basic writing and reading skills are not sufficient for employment in transition economies and secondly that if an employment strategy is necessary to exit poverty then a strategy that goes beyond basic education is necessary.

Figure 1
Different definitions of literacy

UNESCO		People are functionally Literate when they have acquired reading and writing skills
OECD	Defines five levels of Literacy	
	Level 1	Inability to determine the right amount of medicine (Reading skills)
	Level 2	Weak skills (people can read but test poorly in new skills acquisition)
	Level 3	Skills necessary for coping with an information society and required for post-basic education
	Level 4&5	Command of higher order information processing skills
European Union		Minimum skills required to actively participate in the modern economy-minimum upper secondary education

Source: World Employment Report 2001-ILO

Thus the main point that emerges is that any poverty reduction strategy should have at least two pillars. Firstly high economic growth is necessary through macro stabilization policies, deployment of resources in socially productive areas, efficient institutions. Secondly growth must be employment intensive and the educational and health status of the population must be adequate for their "employability".

The persisting prevalence of poverty in Sub-Saharan Africa is due, among other factors, to labour markets inability to absorb formal school graduates. This is directly linked to the educational supply of adequate skills that in it depends on both curriculum relevance and level of schooling.

However there are supply-side constraints of the labour market itself. There is no doubt that many graduates do not find work due to a static economy or a rigid wage structure or certain barriers to entry, but one of the critical areas is the skill mismatch. Africa is no exception and to optimize the resources allocated there is need for an institutional framework whereby these constraints are minimized.

Thus from the demand side a pro-poor strategy cannot exclusively or relatively exclusively allocate resources to primary education. A good example of preponderant resource allocation and the constraints that this places on the entire economic system is clearly exemplified by Uganda. The Universal Educational for all implemented in Uganda has increased primary enrolment, but has decreased resources for post-primary and in the same measure has not significantly reduced poverty, as can be seen from the following Box 1.

Box 1

Universal Primary Education in Uganda

The ESIP (Education Strategic Investment Plan) 1998-2003 was the foundation for the development of education in Uganda over the medium term. The universalisation of primary education in this plan was the major education priority. The attainment of Universal Primary Education (UPE) falls within the International Development Goals to reduce poverty by half in 2015. It is only through the overall development strategy of Uganda that the educational policies can be understood. Uganda is one of the beneficiaries of the Heavily Indebted Poor Countries (HIPC) and the debt relief consequent to this initiative was earmarked for increasing public expenditure on growth-oriented and anti-poverty programs. Thus the Government's strategy was "…. High economic growth and poverty eradication, in the context of continued macroeconomic stability underpinned by appropriate fiscal, monetary and structural policies, will continue to be the government's principal economic and social objectives" (Policy Framework Paper-Uganda .IMF).

Table 1 gives some indication of cost of the ESIP, in terms of inter-sectoral allocation as well as projected over time.

Table 1: ESIP Program Framework by Sector (US$ million)

	FY 97/8-2000	FY 2000-02/3	Totals
Primary Education	278	188	466
Secondary Education	41	59	100
Post-Secondary Education/Vocational	32	35	67
Higher Education	33	33	66
Institutional Development	6.0	5.0	11
Totals	389	321	710

Source: ESIP-Government of Uganda, 2001

The review period has been shifted to 2001-10, wherein there has been a major emphasis vis-à-vis the original ESIP, on post-primary education. The principal causes for such a departure from a Government strategy were:

The increase in demand in terms of a quantity of students from primary to post-primary education. In Government circles it is known as the "bulge" effect"; in other words if the majority of primary graduates request to go to secondary school there is a further strain on public resources. It is interesting to note that the bulge effect necessarily means the demand for secondary and tertiary education is expressed notwithstanding Government policy on primary schooling. This could be the result of labour skills demanded that are not met by primary school graduates. From Table 1 we can note that the vast majorities of resources for education were placed in primary education, due to the UPE goal. The continuation of post-primary education would lead to the capacity of secondary schools being stretched. The "bulge" effect is carried over also from secondary to tertiary education.

Source: ESIP 2001-2003, Government of Uganda.

Determining appropriate Institutional arrangements

Although much of the benefits of post-primary education are difficult to measure the cost of insufficient investment in tertiary education can be high. Sustainable transformation and growth throughout the economy cannot be achieved without an innovative tertiary education system to help build absorptive capacity that is required if private sector investment and donor resources are to have a lasting productive impact.

At the same time the development of a holistic education system calls for a comprehensive approach to resource allocation. A more balanced distribution of budgetary resources, away from the "pro-poor" emphasis on primary education, is a necessity if one of the strategies of exiting poverty is through employment. Another aspect is appropriate sequencing of investment across the three levels of education and this depends on a country's level of development, pattern of economic growth and fiscal situation (World Bank 2003).

As was said above the African countries do spend a substantial amount on education in general, yet there are presently two diverging aspects. The declarations of universal education and pro-poor strategies of late have emphasized primary education because of its lower cost and its higher rates of social return. On the other hand there is the new globalised economy, which requires skilled labour that definitely goes beyond basic reading and writing skills.

Given the limited resources of most African countries the focus on primary education has crowded out post-primary education public resources. This has resulted in diminishing quality in post-primary education and the introduction of forms of cost sharing. Besides the problem of equity in private funding of post-primary education, the lack of adequate management, lower quality of post-primary education become crucial. The demand for skill upgrading by the global economy causes a re-thinking of education and development.

Although there is no "fit for all" for an educational system that satisfies both pro-poor as well as skilled labour requirements, there are a number of elements that can be applied across the board.

Firstly for pro-poor growth the focus on primary education should be more adapted to national needs. In other words there seems to be a micro-macro paradox of returns to lower levels of education (micro-studies) being higher, yet growth literature shows that volume and quality of human capital as well as other factors of production play an important part in economic growth (Paddison &Mitiku 2001).

In terms of primary schooling, committing more effective resources, while at the same time introducing performance management measures to reduce waste and increase efficiency is a strategy to enhance the returns to primary education. But at the same time the increase in public expenditure on post-primary education is a necessity for the supplying of adequate labour skills.

In this context the link between education and economic growth is a key aspect for matching supply and demand of labour skills and hence equipping graduates with assets to exit poverty. The East Asian miracle is a case in point, where the East Asian countries have experienced dramatic growth over the last three decades, which can be accredited to the link between education and economic growth among the most important factors.

Policymakers in Asia realized at an early state that to become competitive, large investments in physical as well as human capital would have to be made. Thus, no surprise that in nearly all the rapidly growing East Asian economies the transformation of education and training in the period 1960-1990 was dramatically good.

As noted earlier, between 1970 and 1989, real expenditures per pupil at the primary level rose by 355% in Korea. The comparable figure in e.g. Kenya was a mere 34%. In 1987 Korea moved rapidly from primary to secondary education: whereas enrolment rates in the latter were 35% in 1970, they had increased to 88% in 1987.

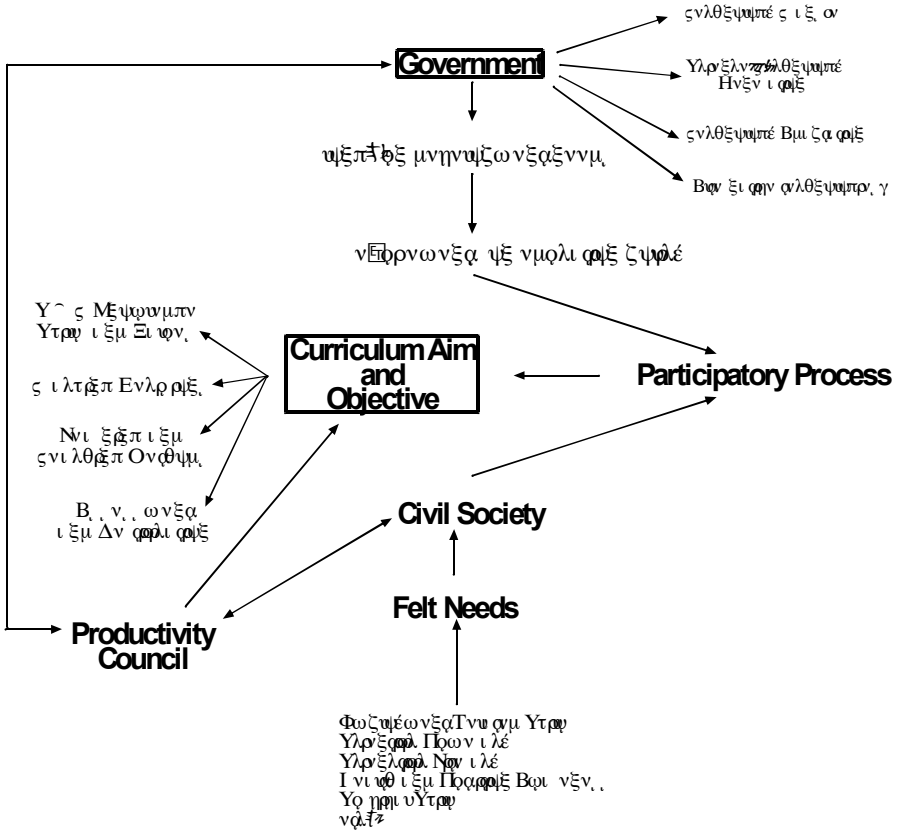
A typically Asian feature of the Korean take-off was that industrial policy was such as to enhance feedback mechanisms to the educational system in general and technical education in particular through the productivity councils. In addition, the government directly supported private R&D through tax incentives, tax credits etc.
All in all, there is a lot to learn for Africa from Korea's past achievements in supplying the labour market for technical skills with highly qualified workers.

The major points that emerge from the Asian Model are:

- State involvement in educational inputs closely linked to labour market demands.
- Monitoring of educational attainment as shown by test results above to achieve quality
- Emphasis on Science and Technology across all levels of education
- Linking Technological inputs into industry as inputs into schooling structures in general, curriculum development in particular.

The interesting element is the institutional framework in which the economic growth and poverty reduction took place. From Figure 1 one can realize a number of crucial items in the link between education, economic growth and poverty reduction.

Figure1: Institutional Framework in East Asia



***Source**:* A.Gauci, O.Paddison (2001) Towards a Knowledge based economy: the relevance of Curricula in Africa?

This institutional framework would have an effect on both curriculum development as well as prioritization of investments in level of education. The Asian model has stressed the "assimilation" model of technology, notwithstanding that the technological content in the 60s was less intense, whereby

entrepreneurship, innovation and learning became key aspects of manufacturing growth. Moreover, much of the successful absorption effort is attributed to efforts by firms to learn new opportunities, and undertake minor by cumulatively significant changes in the production process.

This institutional framework has some application in Africa, in that the matching between labour demand and the educational system is rather weak. The need to link skills required by the market and the educational system is a strategy for exiting poverty. The employment of graduates at whatever level does necessitate that cognitive skills acquired in formal schooling meet demand of the market. Thus the labour demand side of markets indicates what the educational system should produce. The African context does not have any institutional framework that attempts to link so effectively development and education. The participatory link is important, given the governance issues presently being portrayed as vital for effective development. The bottom-up institutional framework, would involve users of educational facilities as a major stakeholder in the definition of educational policies at local, regional and national levels. .

Financing

The acceptance of a strategy that recognizes that employment is central to the objective of poverty reduction in this interdependent global economy also recognizes that primary schooling is not enough. The high cost of post-primary education in Africa (as can be seen from Table7) is a major impediment to investment in secondary and tertiary levels of education.

The implementation of cost sharing and the private providers of post-primary education has been the most often alternative for African countries. This has meant that equity has diminished unless countervailing measures are taken. The rationale for pro-poor growth, if shifted to "employability" means that secondary and especially tertiary education must be made more accessible to the poor in African societies.

There are a number of strategies that can be followed in this regard. First of all public spending has to be more efficient and increase quality of output. Allocative and internal efficiency of current education spending must be improved for possible re-allocation of funds to secondary and tertiary education.

Secondly user fees must be based on some form of means test. The cost sharing can be mitigated by the introduction of threshold income below, which there is some form of financial support. For example Makarere University has an interesting process of selection based on regional, gender and income

criteria for Government-based scholarships. Besides the choice of the area of study, determines the participation into the scholarship scheme or otherwise (ECA 2001). In other words the financial support is also determined by what the labour demand is.

Thirdly the introduction of loans is another policy possibility, introduced in Kenya. Although there have been some problems with retrieving loans, there is a close correlation between employment and loan repayment. In other words the match between labour demand and educational supply renders the loan process more feasible.

Thus pro-poor growth, and its frequent financial instrument the PRSP requires an analysis of both supply-side constraints as well as labour demand, since one of the most important strategies for exiting poverty is employment. This in turn means that the educational output should match labour demand and this is definitely an important aspect of any poverty reduction strategy.

Policy Recommendations

- Education is fundamental to enhancing the quality of human and ensuring social and economic progress. But because of large gender and social differences in access, added to low quality and financing, educational achievements have been limited in most African countries. The eradication of these differences as well as of adult illiteracy remains a major challenge facing most African countries in the following years. Poor and marginalized people should be given a chance to improve in their enrolment access, by a fair government educational programs and policies targeting spatial allocation of resources among various geographic areas.

- The issue of quality is of great concern and further emphasis should be put on quality of teachers' training for improvement of the services they render. Lowering number of pupils attending class, as well availability of school supplies will yield better results. In addition to this, school retention programmes will help reduce drop out rates.

- The link between education and employment should also be seriously looked into. This is a limit of PRSPs that analyse educational needs from the supply side and public financing. Importance should be given to the skill requirements demanded by the labour market

and how this affects educational level and output. Any pro-poor strategy must emphasize employment as one of the critical areas of exiting poverty. Poor people, and women in particular have a higher risk of unemployment, especially in an environment where skills must be upgraded constantly to cope with volatile labour market conditions. There is need to encourage investment in capacity building and strengthening, ensuring proper distribution of educational resources among

- Another area that should be analyzed is that ICT provides a changing environment for the job market, but also an opportunity as an efficient tool. Distance learning in Africa is still in its infancy, yet holds great promise in terms of access and bridging the rural-urban divide. The problems of accreditation and course content of distance learning institutions, A general global problem, can be taken up at regional and sub-regional level as a strategy to reduce cost and place it firmly on the political agenda.

- The formation of centers of excellence in education at the regional level in Africa is another potential for poverty reduction through education. Since one of the problems is quality, ensuring quality through high-ended courses determined by the market would ensure "employability" as well as economies of scale. This is also determined by the free flow of skilled labour and accreditation across African countries.

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